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ABSTRACT

A two-year research activity was undertaken to develop an individualized curriculum delivery system for competency-based vocational education. Foci of the research were the development of a theoretical framework for the delivery system, identification of components and processes of the system; and development of validated criteria to be used in the selection, organization, and presentation of learning experiences. Instructional components and processes appropriate for the vocational setting and conducive to competency-based education were derived through field analysis and other methods and are described in the project's first product, "Individualizing Instruction for Competency-Based Education." The derived and individualized techniques were behaviorally described and validated with a sample of Florida vocational instructors. These techniques and guidelines for their use were described in the project's second product, "Delivering Competency-Based Vocational Education." The project resulted in curriculum delivery system which (1) addressed all aspects of the vocational curriculum, (2) was verified as practical by exemplary vocational teachers, and (3) provided the basis for conversion to an individualized competency-based instructional approach in vocational-technical education. (BM)

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Final Report - Volume I

Project No. V0155VZ
Grant No. OEG-0-74-1645

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DEVELOPMENT OF A CURRICULUM DELIVERY SYSTEM FOR INDIVIDUALIZING INSTRUCTION IN VOCATIONAL-TECHNICAL EDUCATION

June 1976

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Bureau of Occupational and Adult Education

CE 013 204

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A two-year research activity was undertaken to develop an individualized curriculum delivery system for competency-based vocational education. Foci of the research were the development of a theoretical framework for the delivery system; identification of components and processes of the system; and development of validated criteria to be used in the selection, organization, and presentation of learning experiences.

Through field analysis in vocational classrooms, comprehensive literature review, and scholarly critique, instructional components and processes appropriate for the vocational setting and conducive to competency-based education were derived and described in the project's first product, Individualizing Instruction for Competency-Based Education.

The derived individualization techniques were behaviorally described and validated with a sample of Florida vocational instructors. These techniques and guidelines for their use are described in the project's second product, Delivering Competency-Based Vocational Education.

The curriculum delivery system is a technology-based instructional model with a flexibility that allows for its use in vocational programs in all types of institutional settings. In the model, individualization is perceived as involving a constellation of strategies and techniques available for helping learners master competencies; notions of individualization exclusively as programmed instruction, self-pacing, autoinstruction, or modularized curricula are explicitly rejected.

Final Report

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June 1976

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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Bureau of Occupational and Adult Education

PREFACE

Special appreciation is extended to those institutions and individuals who contributed to the successful completion of the research effort described in these pages. Florida A & M University, which undertook fiscal administration of the project between June of 1974 and December 1975, and Florida State University, which administered the project during the no-cost extension from December 1975 to June 1976, provided vital institutional services and resources.

The professional staff of the project provided a range and depth of expertise clearly matched to the challenging scope of the research objectives. The initial organization and direction of the research was shaped largely by Dr. B. F. Johnson, project manager from the project's inception until January 1976. Dr. C. T. Harrington, who served as project manager during the final phase of the project, was responsible for overseeing the completion of the research and production of the major products. Evaluation design and execution began as the responsibility of Mr. M. C. Mitchell, whose responsibilities were assumed by Dr. R. L. Fagan during the project's final period. Dr. Fagan, from the beginning, was responsible for design of evaluation instruments and data collection and analysis mechanisms. Dr. Sue P. Freedman and Ms. Susan Reichman served, respectively, as coordinator for dissemination and diffusion and specialist in instructional design and development.

In addition to their other responsibilities, Dr. Harrington and Dr. Fagan prepared and produced this final report.

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CHAPTER 1

INTRODUCTION

The USOE Part C Project, "The Development of a Curriculum Delivery System for Individualizing Instruction in Vocational-Technical Education," is described in this report. The project (hereafter referred to as CDS) was conducted with Part C monies between June 1974 and December 1975, and concluded between January and June 1976 with funding from the Vocational Division of the Florida State Department of Education. The purpose of the project was the development of an individualized instructional management system and validated criteria to be used as the basis for individualizing vocational-technical instruction in Florida.

The need for a comprehensive curriculum delivery system for individualizing vocational instruction in Florida emerged as part of the state's larger commitment to implement a competency-based approach in vocational education. This commitment has been articulated by state educational leaders for the past several years (Daniel, 1970; Golden, 1973; Florida State Department of Education, 1971). At Florida's statewide annual conference of vocational educators in 1975, the Director of the Division of Vocational Education, Florida Department of Education, delivered a keynote address highlighting for all teachers the activities within the state which will combine to produce competency-based education. In this address, Florida's involvement in the Vocational Technical Education Consortium of States (V-TECS) was described as a critical component in the competency-based effort. Through V-TECS, lists of crucial entry-level skills are being derived from occupation surveys, presenting instructors in a wide variety of vocational fields with the ability to center instruction on skill performances that provide employability for learners. Also underlined in that address as an essential ingredient in a competency-based system was a model for individualization techniques which can be used in any vocational classroom to permit all learners to achieve competence in the given job-related skills, whether derived from V-TECS or some other source.

Both in Florida and in the broader national movement to competency-based instruction, individualization is considered as essential (Elam, 1971; Houston, Jones, & Howsam, 1973). The assumption is that when a varied group of learners attempt mastery of a given group of skills, their needs will be sufficiently different to necessitate individualized instruction.

The assumed linkage between competency-based instruction and individualization, coupled with the unresolved need for a comprehensive model of future-oriented teaching needs in competency-based education (Joyce, 1973), underlay the development of the CDS project. This project, it was hoped, would lead to a systematic and inclusive mechanism whereby instructors would be given a full array of techniques by which to meet the needs of individuals as they attempt to demonstrate a standard of competency in one or more job-related skills.

The overall aim of the project, then, was to focus on the processes needed for developing and validating criteria utilized by instructors in selecting, organizing, and using learning experiences and instructional strategies to teach pre-specified, pre-validated, job-related competencies. Specific objectives of the project were as follows:

1. The development of a theoretical framework for the curriculum delivery system;
2. The identification of contributing components and processes of the system;
3. The development of validated criteria to be used in the selection, organization, and presentation of learning experiences;
4. The fieldtesting and refinement of criteria used in the teaching-learning process;
5. The promulgation of the curriculum delivery system, including components and processes.

In meeting project objectives, the professional staff worked closely with teacher educators, curriculum specialists, state department of education personnel, and classroom instructors, both in the explication of the theoretical framework for the curriculum delivery system and in the identification and validation of criteria for teachers to use in planning their instruction.

As a starting point for the development of the theoretical framework, a widely known curriculum model (Taba, 1967) was used as a focus of inquiry (see Figure 1). Through field analysis in vocational classrooms, a comprehensive review of the literature, and the scholarly critique of nationally known experts, the components and processes appropriate for the vocational setting and conducive to competency-based instruction were derived; these components and processes were then described in terms of the Taba model. This description is incorporated in the theoretical framework paper which constitutes the project's first major product, Individualizing Instruction for Competency-Based Education.

Next, the set of derived individualization techniques was behaviorally described and validated with a selected group of vocational instructors in Florida, to determine which techniques were usable by teachers and to identify guidelines for their use. These validated techniques and the guidelines for their use constitute the criteria called for in the project objectives. The second major product of the project, Delivering Competency-Based Vocational Education, describes the operationalization of these criteria. (Throughout this report, this second major product is referred to as a procedural manual.)

Efforts to promulgate the curriculum delivery system began as the major project products became available. Initial dissemination and diffusion of the model is described in a later chapter. Further, more comprehensive promulgation is scheduled to take place over the next several years with the development of a comprehensive learning system for training vocational teachers in the curriculum delivery system.

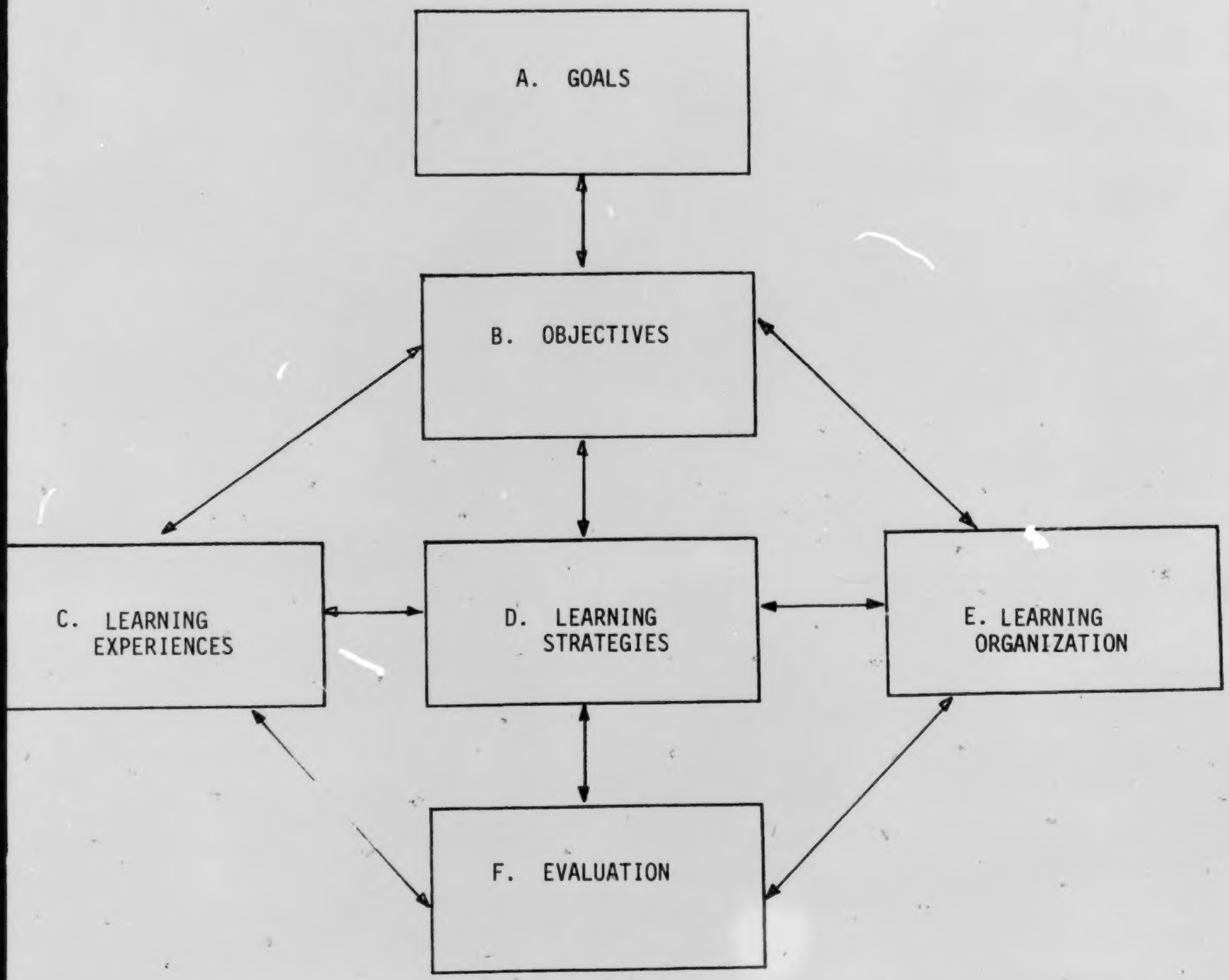
A. GOALS
B. OBJECTIVES
C. LEARNING EXPERIENCES
D. LEARNING STRATEGIES
E. LEARNING ORGANIZATION
F. EVALUATION

Figure 1. Curriculum Model for the Theoretical Framework Paper

The curriculum delivery system incorporated in the two major project products is a technology-based instructional model, both developmental and operational, which is most markedly characterized by its breadth of applicability in vocational-technical settings. Built into the model is a flexibility of approach and implementation which allows for its use in the vocational programs of conventional high schools, in area vocational-technical centers, in adult education programs, and in institutions serving special needs populations such as migrant, mentally handicapped, and academically disadvantaged students.

The view of individualization taken in the model is similarly broad and flexible. Individualization is perceived as involving a constellation of strategies and techniques available for helping learners master competencies. Notions of individualization exclusively as programmed instruction, learning activity packages, self-pacing, autoinstruction, or modularized curricula are explicitly rejected; instead, there is a conception of individualization as the adjustment or alteration of instruction as often as necessary and in whatever ways that are required to meet individual needs in reaching mastery of the competencies that the individual sets out to acquire.

Subsequent chapters describe the methods and procedures used in achieving project objectives; results of the research; interpretative conclusions of the research; and recommendations based on the results and conclusions. Copies of major project products are appended.

CHAPTER 2

METHODS AND PROCEDURES

This section describes the procedures for developing the theoretical framework paper and the procedural manual. Included are descriptions of the roles played by numerous individuals and groups. The various stages of development and production are described for both the theoretical framework paper and the procedural manual. Predevelopment field observations, selection of fieldtest instructors, development of fieldtest data collection instruments, and vocational instructor input to manual development are emphasized. Table 1 shows the time frame for the entire project, with the major developmental activities highlighted.

Development of a Theoretical Framework

The development of a theoretical framework for the Curriculum Delivery System involved the cooperative efforts of the CDS project staff, a state task force, a national panel of experts, and Florida Department of Education personnel. The project staff coordinated all the developmental efforts, conducted literature reviews and onsite visits of vocational programs. Utilizing input from the project staff and their own expertise, the task force developed first draft versions of the theoretical framework paper. The national panel of experts reviewed the draft version of the paper, jointly put together by the project staff and state task force, and made suggestions for revisions which were later incorporated into the paper by the project staff. Personnel from the Florida Department of Education provided information regarding state policy and procedures, related activities, and long-term state educational goals relevant to the shaping of the theoretical framework. With the cooperation of project supervisors in the Board of Regents and the Division of Vocational and Technical Education, the CDS project manager identified a number of potential task force members who would work closely with the project staff in developing the theoretical framework. Seven educational leaders in varied roles and sectors of the Florida educational system were selected as task force members:

Dr. John Crittenden, Principal
Avon Park High School

Dr. A. D. Hauenstein
Department of VTAE
Florida International University

Dr. George Mehallis, Director
Division of Technical & Vocational Studies
Miami-Dade Junior College

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Dr. George Mehallis, Director
Division of Technical & Vocational Studies
Miami-Dade Junior College

Dr. L. H. Perkins, Chairman
Department of VTAE
University of West Florida

Dr. B. O. Smith
College of Education
University of South Florida

Dr. Hollie Thomas
Vocational-Technical Education
Florida State University

Dr. Emmett Williams, Associate Dean
College of Education
University of Florida

Five meetings were held with task force members during September and October 1974, and research activities were conducted through site observations and a continuing review of literature.

On September 17, 1974, the project staff met with Dr. B. O. Smith of the University of South Florida, task force chairman, to plan for the first meeting of the full task force. On September 24, 1974, the staff met with the task force for the first time. (Two meetings were held subsequently with members unable to attend this meeting.) The purpose of this meeting was to present the task force with an overview of the project's development, its aims and objectives, and the central role to be played in the project by the task force.

Following this initial orientation meeting, the staff distributed approximately 40 relevant documents and microfiche to the task force members in preparation for a second meeting, the major purpose of which was the initial conceptualization of the components of the theoretical framework paper. This second meeting, a two-day session, was held October 12 and 13 in Clearwater, with project supervisors, staff and task force present. The agenda of the meeting was the discussion and clarification of the six blocks of the Taba model to be explicated in the theoretical paper. Emerging from these discussions was the decision that each task force member would prepare an outline summary of the contents of one block in the model. These outline summaries were to be compiled by the staff, and, along with staff critiques, would form the basis for discussions at the next meeting of the group. In the interim before the next meeting, the staff continued its literature searches to identify materials relevant to the model and to the various blocks within it.

On November 8, 1974, the task force and staff met in Miami to review the task force outlines and staff critiques of the outlines. These were then revised and amplified to be used as guides for production of the first draft of a complete narrative explication of the theoretical framework paper. A two-day work meeting was scheduled for December 15 and 16, 1974, in Tallahassee, at which time task force members would produce the first draft narratives of the theoretical paper.

Also, at the November 8 meeting the project staff presented a paper which proposed the integration of individualization techniques with the curriculum model. Task force members requested, in addition, a glossary of terms which would be used in the theoretical framework paper and throughout the project, and a list of all other documents and products to be developed as a part of the project. Both the glossary and list of products were provided to task force members and supervisors.

On December 15 and 16, 1974, the state task force met in Tallahassee to produce a first draft of the theoretical framework paper. Following production of the task force's draft, the staff edited and revised the paper into a formal first draft. After a preliminary review of the first draft by the task force chairman, Dr. B. O. Smith, the paper was submitted to the task force members on January 14, 1975, for their review and critique.

Meanwhile, in conjunction with Board of Regents and Division of Vocational and Technical Education personnel, the CDS project manager identified several leading educators as potential National Panel members. The purpose of this panel was to review and critique the theoretical framework for the Curriculum Delivery System. While the theoretical framework paper was being reviewed by the task force, final selection of the National Review Panel was being completed. Those individuals who agreed to serve the project as National Panel members were as follows:

Dr. Robert Gagné
Florida State University

Dr. Duncan Hansen
Memphis State University

Dr. Robert Mager
Mager Associates, Inc.

Dr. Robert Morgan
North Carolina State University

Dr. Ralph Tyler
Science Research Associates, Inc.

Completing the National Panel selection by February 1, 1975, the staff then concentrated its efforts on revising the theoretical framework paper in accordance with the task force's suggestions. This revision was completed by February 10, 1975, and a package of materials for review was submitted to the National Panel members for their review and critique. The package included (a) the revised theoretical framework paper, (b) a set of critique sheets for assistance in reviewing the paper, (c) papers describing the project and the current state of the art of individualization in Florida as observed by project staff, and (d) a cover memorandum describing the package and the task of the National Panel members. National Panel members reviewed and critiqued the contents of the package and made suggestions for revision of the theoretical framework paper. These suggestions were incorporated into the paper by the project staff, in producing the final draft of the theoretical framework. The review and critique process was completed by March 15, 1975. Appendix A contains a copy of the theoretical framework paper.

When the theoretical framework paper became available in print in January 1976, it was distributed to a wide range of individuals. First on the list were 3000 copies allocated to participants in the Florida Vocational Education Conference held in Orlando in August 1975. Those participants included heads of area vocational schools, school system vocational teachers and administrators, and state department personnel involved in vocational education. Additional copies of the framework paper were distributed to the principals or directors of the 24 schools involved in the development and fieldtest of the CDS procedural manual.

As a result of these initial distributions, the staff began receiving requests for additional copies of the paper to be used in county-level workshops and other in-service activities. This opportunity has been used as a means of informing vocational educators about other project products which may be of use to them in in-service activities. Appendix B contains a list of persons to whom the framework paper has been distributed.

Procedural Manual Development

This section describes the procedures used in the development of a teacher's guide to individualized instruction. Included are descriptions of the:

1. Literature review and predevelopment field observations
2. Selection of fieldtest instructors
3. Development of fieldtest data collection instruments
4. Vocational instructor input to manual development

Literature Review and Predevelopment Field Observations

For approximately six months prior to the development of the procedural manual, the majority of staff time was spent in school site visitation and literature review. The primary sources for materials were clearinghouses such as ERIC, professional journals, books, conference reports, and state departments of education. As the development of the theoretical framework progressed, it, as well as the school site observations, served as a guide for reviewing literature on individualized instruction. Individualization techniques and procedures that required a minimum of administrative and resource support were the primary focus of the review.

The objectives of field observations were to document the extent of individualization employed in Florida vocational-technical education and to determine the discrepancy between the techniques in use and the individualization techniques potentially available. Emphasis was placed on techniques available to the vocational-technical instructor which require little or no administrative support. The purpose of these observations was to assess the need for the proposed curriculum-based model of individualization and to identify individualization techniques for inclusion in the procedural manual.

In order to assess the present extent of individualization in vocational-technical education in Florida, a number of vocational-technical schools, conventional high schools, junior colleges, and other institutions were selected for visits for discussions with instructors and program administrators and for direct observation of the instructors and learners in the classrooms. A formal observation scheme proved cumbersome and led to no greater inter-observer reliability than observation without such aid; it was therefore abandoned. Less formal observation had the virtue of being minimally disruptive of normal classroom routines. Following each visit, each staff member wrote a narrative summary of the techniques of individualization observed. Comparison of summaries provided a list of the most frequently applied techniques of individualization.

The following schools were visited during the period between September 1974 and March 1975.

1. Lively Vocational-Technical School (Tallahassee)
2. Beggs Education Center (Pensacola)
3. Lindsey-Hopkins Education Center (Miami)
4. Pinellas County Work Evaluation Center (St. Petersburg)
5. Hernando County Adult School (Brooksville)
6. Washington-Holmes Area Vocational Technical School (Chipley)
7. Gadsden Vocational-Technical School (Quincy)
8. Seminole Junior College (Sanford)
9. University of North Florida (Jacksonville)
10. Lake County Area Vocational-Technical Center (Eustis)
11. Duval County School System (Jacksonville)
12. Lake City Community College (Lake City)
13. Naval Training Center (Memphis, Tenn.)
14. Community College of the Air Force (Randolf Air Force Base)
15. Air Training Command (Lackland Air Force Base)
16. Maynard Evans High School (Orlando)
17. Seminole Junior College Vocational Assessment Center (Sanford)
18. Skyline Center (Dallas, Texas)

In addition to onsite observations and discussions with teachers and administrators, the project staff attended a number of state and national conventions and workshops devoted to vocational education, individualized instruction, competency-based instruction, teacher training, and similar topics. These conferences and workshops allowed the project staff to integrate the information obtained from onsite observations in Florida with observations from related projects in Florida and other states. Appendix C contains a list of these conferences and workshops.

The individualization techniques and strategies derived from literature reviews, conferences, and field observations were organized according to the curriculum framework discussed in the introduction and explicated in the theoretical framework paper. These techniques and strategies were described procedurally and compiled into a set of manuals (hereafter referred to as the procedural manual). This set of manuals then went through a series of field trials and revisions with the help of 50 vocational instructors in several schools and counties in Florida.

Selection of Instructors for Field Trials

The development of a systematic plan for teacher selection began with an extensive review of the literature on instructional change, individualized instruction, and the dissemination/diffusion of educational innovations. As a result of this review, it was determined that the fifty teachers selected for participation in the fieldtest should be positively inclined towards individualized instruction, should be generally flexible in their approach to instruction, and should be receptive to innovation. In addition, teachers in the fieldtest should be able to work well with both administrators and fellow teachers in the schools. Selected teachers should also be teaching in fields in which V-TECS catalogs would be available in the near future, since the curriculum delivery system to be developed was to serve in part as the means of implementing the V-TECS catalogs of objectives. Teachers who met these criteria would not only be effective in fieldtesting the project product, but would also serve as a potentially valuable cadre of agents for the dissemination and diffusion of the product at a later time. The setting of these criteria for teacher selection led to the second stage in the teacher selection process, the development of instruments for obtaining information from both teachers and school administrators.

A review of the literature was carried out to find an instrument to measure teacher attitudes toward individualized instruction. In addition, a list of teacher and student behaviors commonly associated with individualized instruction was compiled during the literature review. An instrument (Appendix D) was found which appeared to be relevant to the present project. This instrument, the Teacher Attitude Inventory (TAI), was developed by EPIC Diversified Systems Corporation of Tucson, Arizona, for use in the California Teacher Development Project for Systems of Individualizing Instruction. The TAI is still in use by the California Project, which reports high but unspecified reliability of the test. The TAI consists of thirty items designed to assess attitudes toward the six major dimensions of individualization: pacing, instructional resources, individual needs, objectives, evaluation, and teacher role. Because there was little reliability or validity data available on the TAI, the decision was made to develop a second instrument, similar to the TAI, and to use both instruments in the construction of an individualization measure for the teacher selection process.

The second instrument (Appendix E) was comprised of 15 items similar to those on the TAI. These items were selected from a pool of 25 items developed by the project staff to assess attitudes towards the various dimensions of individualization. The development of the items was based on an extensive review of the literature on individualized instruction. The original pool of 25 items was independently reviewed by six experts: four specialists in individualized instruction, including among them a measurement specialist and a former vocational education teacher; an additional expert in testing and measurement; and a well-known educational psychologist. Experts were asked to indicate those items which they felt (a) represented unambiguous examples of items measuring important dimensions of individualized instruction, and (b) were so constructed as to discriminate between individuals who favor individualization and those who do not. As a result of the suggestions of this group of experts, a number of items were rewritten or revised and others were discarded. The resulting 15 items were compiled in random order into the Opinion Questionnaire (OQ) attached as Appendix F.

Both instruments were administered to 13 Florida State University education classes involving roughly 150 students (juniors and seniors). The sample was composed of two diagnostic teacher training classes (that emphasized individualized instruction), one senior-level social studies education class (that stressed group as opposed to individualized instruction), eight senior-level general education classes, and two vocational education classes. In the latter, most students had had journeyman occupational and teaching experience. The purpose of these administrations was to collect data with which to construct an instrument which would yield at least minimal test-retest and internal consistency reliability and which would discriminate fairly well between persons favorable to individualization and those not so favorable.

Several item analyses were conducted to determine the final set of items for the individualization measure. The aim of the analyses was to obtain a pool of items that, although concerned with different aspects of individualization, would lead to internally consistent responding. From that pool of items those selected for the final scale would be those that discriminated most between relevant segments of the standardization sample.

Using coefficient Alpha as a measure of internal consistency, separate analyses were conducted for the first and second administrations of the TAI for the sample of vocational educators. Analysis of the first TAI administration found an initial Alpha reliability coefficient of .81. After the first iteration with a deletion criterion equal to .40 or less item-total correlation (with item removed), 16 items were deleted giving an Alpha reliability coefficient of .98. Alpha for the second TAI administration was .83 initially which increased to .98 with the deletion of 17 items following the first iteration with a .40 deletion criterion.

Analysis of the combined OQ and TAI items for the sample composed of Diagnostic Teaching students, Education 401 students, and Social Studies Education students found Alpha reliability coefficient equal to .93 which was increased to .95 following the deletion of 9 items using the same deletion criterion as above.

Nine items were deleted on the basis of the above analyses. Any item with an item-total correlation (item removed) of .40 or less on all three of the above analyses was deleted from the final item selection pool.

The next step in the item selection process involved eliminating items on which there was little difference between students likely to be very favorable toward individualized instruction (Diagnostic Teacher trainees) and students who represented a wider range of program areas (Education 401 and Social Studies Education students). Since students on the average appeared quite favorable toward individualized instruction based on their questionnaire performance, the differential frequency of "most favorable" responses was used as a basis for item selection. The criterion for selection in this stage was that at least 45% of the Diagnostic students had to respond "most favorable" on the item while the percentage of general education students responding "most favorable" had to be at least 15% lower. Fifteen items were eliminated through this procedure, at which point the remaining 28 items were put through an item analysis (diagnostic students only) resulting in three more items being eliminated. The final version of the individualization measure was therefore composed of 25 items, dealing with the various aspects of individualization, which correlated highly with each other (range r = .43 - .70), had an Alpha reliability coefficient = .94, and was responded to favorably by people already known to be favorably inclined toward individualization. This 25-item measure of attitudes toward individualization became Part II of a Teacher Selection Questionnaire.

This questionnaire was developed to be administered to all vocational teachers in the seven-county area of the fieldtest. It is made up of three parts. Parts IA and IB were designed to obtain relevant background information regarding age, sex, ethnicity, education, work experience, and professional affiliations of respondents. Part IC, labelled "Colleague Recommendations," contains three questions and asks teachers to list the names of their colleagues (a) whom they would be most likely to ask for professional assistance, (b) whom they most enjoy socializing with, and (c) whom they believe would be most likely to accept and adopt a new educational practice. Respondents' answers to these three questions permitted the identification of teacher "opinion leaders" in the schools, individuals of critical importance in implementing and diffusing an instructional innovation.

Part I of the questionnaire was developed by the project staff and submitted for review to two experts in the construction of tests and to a third person experienced in conducting school-based research. Questions were revised based on recommendations of the reviewers, and written in final form.

Part II was developed as described above.

Part III of the Teacher Questionnaire is a four-point Likert-type attitude scale of twenty items, requiring respondents to express agreement or disagreement with each item. It is composed of three subscales taken from published instruments. Items 1-5 were excerpted from the Rehfisch RI Scale (Robinson & Shaver, 1972). These items measure an individual's need for a stable, orderly environment and the perseveration tendencies of individuals. Items 6-13 were taken from the RAPH Scale (Robinson & Shaver) and measure opposition to any change of judgment or change of plans. The remaining six items of Part III were taken from Wesley's Rigidity Scale, and measure rigidity defined by Wesley as "the tendency to persist in responses that may previously have been suitable in some situation or other but that no longer appears adequate to achieve current goals or to solve current problems" (Robinson & Shaver, pp. 313-316).

The Rehfisch and RAPH subscales were used as the measures of teacher receptivity to innovation. The Wesley subscale was used as the measure of personal flexibility.

Parts I, II, and III of the teacher questionnaire were administered to all teachers in the sample as a single instrument (Appendix F).

To receive input on teacher selection from school directors and principals, a faculty survey was developed. This instrument (Appendix G) was administered to all principals or school directors in the survey. It is composed of six questions. For each question principals are asked to list, in rank order, three vocational teachers in their school who best satisfy the conditions expressed in the question. The questions ask principals to list teachers (a) whom other teachers would be most likely to ask for professional assistance, (b) who are most popular with their peers, (c) who are most likely to accept and adopt a new educational practice, (d) who are most in favor of individualized instruction, (e) who are least inclined towards individualized instruction, and (f) who are generally the most flexible and adaptable. The faculty survey was administered in person to each principal and was accompanied by an alphabetized list of vocational teachers in the school. The principals were asked to review the list prior to being shown the survey questionnaire and were encouraged to refer to the list as they responded to the questions.

The 50 vocational teachers who participated in the project fieldtest were selected from among approximately 1500 vocational teachers currently teaching in 56 comprehensive high schools and vocational-technical schools in Florida. The 56 schools are located in the seven Florida counties of Escambia, Washington, Manatee, Sarasota, Orange, Pinellas, and Hillsborough. The schools range from consolidated rural institutions to inner city urban educational centers. Teachers from all seven vocational areas--agribusiness education, business and office occupations, distributive education, home economics, health occupations, technical education, and trade and industrial education--were included in the study. The counties were selected for the wide range of vocational programs--and therefore, of vocational teachers--they include.

Data from the 1159 teacher questionnaires and 55 faculty surveys were used to select a pool of 140 teachers who were subsequently interviewed to find out whether they were willing to participate in the project fieldtest. To be included in the pool of 140, a teacher had to have a score of at least 75 on the individualization measure (Part II of the Teacher Questionnaire) and also had to be recommended by his colleagues at least once and by his principal at least once. The number of teachers to be selected from the pool in each county was set by determining the proportion of respondents in each county, and using this proportion as the percentage of 50 (total number of teachers to participate in the fieldtest). During the last week in May and the first week in June, 1975, teachers in the pool of 140 were interviewed and details of their participation described to them. Since the total number of teachers who agreed to participate exceeded 50, it was possible to further reduce the list by obtaining a balance across counties of teaching fields for which V-TECS catalogs would become available by December, 1975. Table 2 contains a summary of the background information of 48 of the original 50 fieldtest teachers. During the first month following teacher selection, three teachers dropped out for personal reasons; only two dropped out early enough to be replaced with alternates. Halfway through the fieldtest another teacher also dropped out. She was not replaced, leaving only 48 teachers.

The original 50 teachers were divided into two groups of 25. Group 1 consisted primarily of teachers from area vocational-technical centers, while most of the Group 2 teachers represented vocational programs in high schools. Table 3 lists the schools and the number of participants from each school.

Fieldtest Data Collection Instruments

Data collection instruments used during the development and fieldtest of the procedural manual served several purposes:

1. Documentation of the extent of individualization of instruction in fieldtest classrooms.
2. Documentation of the use of the procedural manuals.
3. Procedural manual evaluation.
4. Assessment of constraints on the use of individualized instruction.
5. Assessment of principals' reactions to the procedural manual and the practicality of the CDS approach to individualization.

The extent of individualization in the classroom. Two instruments were developed to estimate the extent of individualization in the classroom. The first instrument was a daily self-observation form; the second an individualization questionnaire with a nine-point scale of frequency of usage.

Educational Testing Service of Princeton, New Jersey, consulted with the project staff on development of the daily self-observation form.

The observation form was constructed by listing 26 instances of individualization, as described in the manual, which could occur in the classroom. Second, a page of "memory joggers" was developed to aid the teacher in quick recall of each individualization process. These two pages were then augmented by a three-page glossary, in behavioral terms. of each term requiring definition on the observation form. The set of documents is shown in Appendix H.

Originally, the observation form required fieldtest instructors to checkmark the appropriate technique each time they used it. However, after about six weeks of use, a majority of the fieldtest instructors reported difficulties in using the form. They also expressed doubt as to the validity of the data. In response to these problems, the recording procedure was changed to require marking the appropriate technique only once if it was used on a given day.

Appendix I contains an example of the individualization questionnaire which is composed of items paralleling the self-observation form. The response format required instructors to estimate on a nine-point scale the frequency with which they used each of the techniques listed. A cover memorandum indicated the period of time over which the estimates were to be based. The individualization questionnaire was administered in October and December, 1975, and in March, 1976.

Use of the procedural manual. These questionnaires were used to assess the extent to which the fieldtest instructors read, reviewed, or critiqued each draft of the procedural manual. The questionnaires (see Appendix J) listed the section and chapter titles accompanied by a nine-point scale of frequency. A cover memorandum indicated the period of time over which instructors read, reviewed, or critiqued the procedural manual. Group 1 instructors filled out these questionnaires in October and December, 1975, and in March, 1976. Group 2 instructors only filled out one procedural manual use questionnaire, in March, 1976.

Procedural manual evaluation. To facilitate instructor input for revisions to the third and fourth drafts of the procedural manual, a questionnaire was given to the fieldtest instructors with each new draft. Appendix K contains examples of these questionnaires. The format of the questionnaires allowed Yes-No and free responses to each section of the manual.

Constraints on the use of individualized instruction. Toward the end of the project's extended funding period, a questionnaire designed to assess the main constraints on implementing the CDS approach to individualization was developed and administered to all fieldtest instructors. Appendix L contains an example of the questionnaire. Each item on the questionnaire referred to a chapter in the manual; the instructor was asked to circle one or more of six major areas that placed constraints on the implementation of the techniques in the associated chapter. The instructors could also list other areas of constraint. After circling the constraints, the instructor was asked to expand in writing, giving as much detail as possible. The questionnaire was used to conduct exit interviews with each of the fieldtest instructors.

Assessment of principals' reactions. Appendix M contains an example of a questionnaire designed to assess the opinions of vocational school principals and directors toward several aspects of the CDS project. Distribution of the questionnaire and interviews with the principals took place during February and March, 1976. Three categories of information were addressed in the questionnaire: (a) evaluation of the procedural manual, (b) evaluation of the CDS approach to individualization, and (c) dissemination and diffusion of the CDS approach.

Vocational Instructor Input to Manual Development

Several forms of input were obtained from vocational instructors in the development of the procedural manual. The role of predevelopment classroom observations and discussions with vocational instructors in the development of the procedural manual has already been discussed. In this section instructor input from one-on-one sessions, workshop sessions, and field observations and discussions are described.

One-on-one instructor review. During late June and early July 1975 the preliminary draft of the procedural manual was submitted to a one-on-one review and critique by vocational instructors enrolled in a graduate methods course at the Florida State University. Each section of the manual was reviewed by a different vocational instructor. A staff member worked with the vocational instructor, explaining the purpose of the reviewing task, giving directions for the task, and discussing with the instructors ways of improving the manual. After all sections were reviewed in this manner, appropriate changes were made and the manual was then sent to the 25 of the 50 fieldtest instructors in Group 1 for further review and critique.

Procedural manual evaluation workshops. A total of four workshops were held during the fieldtest period (August 1975 - March 1976). The main purpose of the workshops was to obtain critical feedback on the procedural manual. Input was sought concerning the practicality of the manual, the reading level, suggestions for classroom examples illustrating individualization techniques, format problems, and any other areas where the vocational instructors saw problems.

During August 1975, the first workshop for Group 1 participants was held in three areas of the state; a total of 25 instructors attended. All participants received a copy of the manual and instructions for reviewing the manual about two weeks prior to the workshop. The workshop activities involved small and large group critiques of the manual, which addressed the concerns listed above. Additional workshop activities involved an orientation to the recording procedure to be used during the fieldtest. Also, during August, Group 2 participants were given an expanded orientation to the recording procedure since these instructors had not yet been exposed to the manual. Following this first workshop, teachers in both groups began recording their use of individualization techniques on the recording form described earlier. At the same time, the project staff undertook revision of the procedural manual, basing their initial revisions on the suggestions made by Group 1 teachers at the workshop. Additional revisions were made as a result of suggestions received from teachers by the staff during visits to the teachers' classrooms.

After approximately two months of fieldtest activities, on the last Saturday in October, 1975, Group 1 instructors again met in a workshop to critique the second draft manual which was sent to them prior to the workshop. Suggestions obtained during this one-day workshop led to a third revision in the procedural manual.

On the first Saturday in December, 1975, Group 2 instructors met for the first time to critique the procedural manual, by now in its third version. Like their Group 1 counterparts, Group 2 instructors were sent the manual along with instructions for critiquing it prior to the workshop. As before, their suggestions were considered and appropriate changes incorporated into the manual.

A final workshop was held on the last Saturday in March, 1976, in which both Group 1 and Group 2 teachers critiqued the fourth version of the manual and participated in an assessment of training needs. The final draft of the procedural manual was written following this workshop.

All workshops allowed for structured input either through the use of questionnaires with specific items keyed to the procedural manual, or through specific questions posed by the workshop facilitators. Workshop discussion sessions allowed for a greater range of input than the questionnaires or structured questioning alone.

Field observations. The fieldtest observations were designed to assess the extent of individualization in fieldtest classrooms, to determine factors working against the implementation of individualized instruction, and to discuss problems with the procedural manual and the self-recording devices.

The extent of individualization in the fieldtest classrooms was defined as the number of different individualization techniques used on a daily basis. Estimates of the extent of individualization were obtained from the self-observation form, the individualization questionnaire (described on page 18), and from staff visits to fieldtest classrooms. Staff visits were not long or numerous enough (about one per month to most classrooms) to provide conclusive empirical validation of the instructor's reported use of the individualization techniques. However, the instructors were asked about recording difficulties and attempts were made to probe their understanding of each technique.

Both Group 1 and Group 2 instructors used the same self-recording form and individualization questionnaire. The self-observation data included in this report cover seven weeks in October, November, and December 1975, and 11 weeks from January through March 1976. The questionnaire data are from three administrations--one during the last week in October, another during the second week in December, and the third during the last week in March.

During April and May 1976, fieldtest instructors filled out the individualization constraints questionnaire (see Appendix L) and were interviewed to get greater detail on the nature of the factors affecting their use of the individualization techniques described in the procedural manual.

During the latter half of the fieldtest period, fieldtest school principals and directors were interviewed over many aspects of the project and asked to fill out the questionnaire in Appendix M. Prior to the interview, the principals were requested to discuss the project with the teachers in their school who were involved in the project.

Most fieldtest visits allowed time for instructors to discuss any aspect of the project, their recording problems, concerns about the practicality of many individualization techniques, and suggestions for improving the manual or the project as a whole.

CHAPTER 3

RESULTS

The results of this research fall into several categories and are dealt with in the following order. First, there is a brief discussion of the major products of this research, the theoretical framework paper and the procedural manual. Next, use of the procedural manual is documented, followed by documentation of the extent of individualization. Finally, the forces working for and against the implementation of individualization are presented.

Framework Paper and Procedural Manual

Framework Paper

Appendix A contains a copy of the project's first major product, a theoretical framework paper entitled Individualizing Instruction for Competency-Based Education. The development of the paper was described in the Methods and Procedures section. The framework for individualizing competency-based instruction involves the following components: individualization of vocational goals, performance objectives and criterion-referenced tests, learning experiences, learning strategies, learning organization, and evaluation. Thus, utilizing the structure of a conventional curriculum model, the framework paper addresses the question of the individualization of vocational instruction in terms of the dynamic processes central to the design and development of instruction in competency-based settings. The resulting product is one in which the familiarity and practicality of a curriculum structure is invigorated with the insights of current perspectives among learning and instructional theorists. The major components of the curriculum model are treated descriptively in terms of their implications for individualization:

Goals. The goal to be considered in individualizing is the goal the individual learner has in entering the system. Individualizing in the goals area can be based on learner preference, vocational interest inventories, achievement tests, and job ability assessments. Career education and counseling should be utilized to provide knowledge for use in personal selection of goals.

Performance objectives. The second curriculum area that provides opportunities for individualizing is performance objectives. With matching objectives and criterion-referenced tests, the learning manager can individualize by choosing performance objectives that fill the individual's goal needs. In addition, by pretesting over objectives, the learning manager can prescribe instruction for individual competencies not yet mastered.

Learning experiences. A third major area of individualization is in the learning experiences provided for the learner which aid the student in becoming competent in a performance. For each performance objective, the learning manager lists a set of knowledges and mental and physical skills involved in mastering the objective. When the learning manager pretests the student over these skills and knowledges, unneeded instruction can be eliminated and further instruction can build on those elements already mastered. Learning experiences can also be individualized by providing the variety of media most helpful for the learner in reaching competence. The media that provide a learning experience closest to the desired performance and conditions, and which can be controlled by the learner to suit his or her own needs, are suited to individualization.

Learning strategies. Learner differences in learning style suggest that some individualization techniques can be used in the educational management system, and some can be provided in the learning experiences. Contingency management and peer tutoring are examples of management system techniques which meet individual learner strategies. Providing highly structured experiences or a large amount of feedback in the instructional materials are examples of individualizing within the learning experience.

Learning organization. The sequence of performance objectives in an individual's program and the sequence of events in his or her learning experiences can be individualized, both to motivate the learner and to build on prior learning.

Evaluation. The use of criterion-referenced tests for deciding on a learner's competence individualizes instruction. Individuals continue in learning experiences until they are shown by test results to be competent, regardless of where each is in the course. Also, learners are provided with motivating success experiences as they continue to build competencies.

Procedural Manual

The second major product is a procedural manual for individualizing instruction entitled Delivering Competency-Based Vocational Education. Appendix N contains a copy of the procedural manual.

Unlike the framework paper, which is theoretical and descriptive, the procedural manual is practical and procedural. It delineates the individualization techniques available to teachers in helping them meet the instructional needs of their students and offers specific suggestions as to how teachers can implement these techniques. Organizationally, it is a modification of the curriculum structure utilized in the framework paper.

Following an introduction in which individualization is defined and the teacher's role in it is described, the manual is divided into five sections. The first, Setting and Sequencing Individual Goals, deals with the inputs to the goal-setting process, how personal information on the student can be obtained, how job related information can be presented to the student, the importance of market information in the goal-setting process, and guidelines for sequencing short-term vocational goals.

The second section of the manual addresses the use of performance objectives and criterion-referenced tests to individualize instruction.

In separate chapters, analyzing, developing, and writing performance objectives and criterion-referenced tests are treated.

In the third section of the manual, the development of individualized learning experiences through a variety of instructional strategies is discussed. The role of learner and task characteristics in the individualized use of media and in reviewing, selecting, and adapting materials is the central focus of this section. Individualized pacing, grouping, and tutoring strategies are also examined. An overall functional framework for developing and varying learning experiences is presented.

Section four of the procedural manual deals with the use of contingency management in individualized settings. Included is a step-by-step approach to setting up a contingency management program, descriptions and examples of a variety of behavioral change techniques, and how contingency management can be used in meeting the nine functions of instruction.

The final section of the manual concerns evaluation and management of individualized instruction. A framework for evaluation is presented, and formative and summative evaluation are discussed from the teacher's perspective. The importance of recordkeeping in managing individualized instruction is emphasized, and a selection of options for grading in a competency-based setting is described.

Throughout the manual, actual classroom examples of the techniques described are included. Forms for use in obtaining and keeping records of relevant information are presented. The language of the manual, the topics treated, and the mode of treatment of these topics are all geared to the classroom vocational teacher. It is a product developed with the aid of vocational instructors and intended for use by vocational instructors.

Fieldtest Use of the Procedural Manual

This section presents the results of three administrations of a questionnaire designed to estimate use of the procedural manual during the fieldtest period. Particular interest was in the teacher's estimates of the extent to which they read, reviewed, or critiqued the procedural manual. How much time was spent in these activities and did the amount change over the fieldtest period? Appendix J contains copies of the procedural manual use questionnaires.

Tables 4-6 indicate the extent to which Group 1 teachers estimated they read, reviewed, or critiqued the first, second, and third drafts of the procedural manual. Table 7 indicates Group 2 teachers' estimates of the extent to which they read, reviewed, or critiqued the third draft procedural manual.

From Table 4 it is apparent that most teachers spent very little time with the first draft of the procedural manual. The table indicates the greatest percent of responses fell into categories one, two, and three, where category one shows that many teachers did not read certain sections at all. A fair percent of responses in categories four to seven does indicate some teachers spent a moderate amount of time reading, reviewing, or critiquing most sections of the first draft manual. Finally, only a few teachers estimated they read any sections very frequently. No one section stands out as attracting most teacher attention.

The second draft of the procedural manual was read by a greater percentage of Group 1 teachers who responded to the questionnaire than was the first draft manual. Table 5 shows the percentages. Response percentages generally decreased in categories one and two, while they increased in the moderate to very frequent range from the first to the second draft.

Although only 13 of the 25 Group 1 instructors responded to the questionnaire on the third draft procedural manual, the trend exhibited on the second draft was again manifest on the third. Most teachers responded in the moderate range, as can be seen from the data in Table 6.

Since Group 2 instructors did not receive the first and second draft procedural manuals, they were only surveyed on their reading of the third draft procedural manual. Table 7 shows Group 2 estimates of the extent to which these teachers read, reviewed, or critiqued the procedural manual. This group's response pattern is similar to that obtained from Group 1 teachers on the second and third drafts, but not at all like Group 1's response to the first draft of the procedural manual. There does appear to be a slightly higher percentage of responses by Group 2 teachers in categories seven, eight, and nine than by Group 1 teachers in those categories on any draft of the manual.

In summary, the trend among Group 1 teachers was toward increased time in reading each new version of the procedural manual. No trend can be estimated for Group 2 teachers. Both groups estimated that they spent a moderate to very frequent amount of time reading, reviewing, and critiquing the third draft procedural manual.

Extent of Individualized Instruction

To estimate the extent of individualized instruction in fieldtest classrooms, daily self-observations and periodic questionnaires were used. These data focused on the number of different techniques used, the number of teachers not using a given technique, and the number of days on which any given technique was used. The trend over time was also of interest.

Before looking at the questionnaire and self-observation response percentages, it is pertinent to consider the correlations between the two types of data. Tables 8-13 show these correlations. The first column in each table shows the correlations between the questionnaire and the self-observation data for the week during which the questionnaire was administered. The second column shows the correlations with the self-observation totals from the time period over which teachers were asked to base their questionnaire estimates, except for the first questionnaire which did not have corresponding self-observation data.

For both Group 1 and Group 2 teachers the correlation data are similar. There were only four instances where the correlations were negative, indicating a lack of correspondence between the self-observation data and the questionnaire data. And in no cases were these negative correlations significant. On the other hand, a considerable number of positive correlations were significant. In only a few cases were there differences in the significance levels of the correlations for one week and those for several weeks combined. If the single week correlations over all techniques are averaged, there appears to be a slight tendency for these to increase over time. For Group 1, the average correlation increased from Week 1 to Week 7, but not from Week 7 to Week 17. However, the Group 2 average correlations increased from Week 1 to Week 7 and from Week 7 to Week 17.

Number of Different Individualization Techniques

Table 14 shows the median number of different individualization techniques that were used on each of the 18 weeks. In the table, the rows labeled N indicate the number of teachers on which the median was based. The top row of Table 14 indicates that a slightly greater number of different techniques were used by Group 1 teachers during the middle of the fieldtest period than at either the beginning or end. In contrast, Group 2 instructors showed no such trend in the number of different techniques used over the length of the fieldtest. Also apparent from the table is the tendency for Group 1 teachers to use a slightly greater number of different techniques than Group 2 teachers.

Number of Teachers Not Using a Given Technique

Tables 15-40 show the number of teachers reporting on their self-observation forms that they did not use a given technique on a given week. Tables 41-66 show similar information estimated from the questionnaire filled out periodically over the fieldtest period.

A stable result across Tables 15-40 is the generally large percentage of teachers in both Group 1 and Group 2 that did not use a given technique. There was no apparent consistency in technique use across time. Nor were there consistent differences in technique use between Group 1 and Group 2. Individualized use of print media (Table 22), instructor tutoring (Table 30), and instructor pacing (Table 33) generally appeared to be used by more teachers than the other techniques. Techniques like individualized pretesting (Tables 18 & 19); use of human resources (Table 25); advanced student and community volunteer tutoring (Tables 31 & 32); student, instructor-student, and proctor-student pacing (Tables 34-36); contingency management (Table 37); and varieties of individualized sequencing (Tables 38-40) were used by fewer teachers than were other techniques.

The summary questionnaire data in Tables 41-118 show some consistency with the self-observation data in terms of the number of teachers reporting they never used a given technique. However, in general, the questionnaire data underestimate, compared to self-observation data, the number of teachers reporting they never used a given technique. Rough correspondence between the two sets of estimates was found for individualized use of print media, instructor tutoring, and instructor pacing. Only questionnaire estimates of individualized pretesting, community volunteer tutoring, proctor-student pacing, and contingency management corresponded almost exactly to the percentage of self-report data, indicating these techniques were not used.

Frequency of Technique Usage

Estimates of the frequency of technique use come from the self-observation data (Tables 15-40) and from questionnaire data (Tables 41-118). The self-observation data indicate the number of teachers reporting use of each technique on one or more days each week. For both Group 1 and Group 2 the dominant trend was for most techniques to be used on one or two days a week. This trend persisted over the 18-week fieldtest period; although some techniques, like individualized use of media (Tables 22-27), peer and instructor tutoring (Tables 29 & 30), and instructor and student pacing (Tables 33 & 36) were frequently used four and five days a week by many teachers.

Frequency estimates from the questionnaire data can be examined in Tables 41-118 by looking at response categories two through nine. The combined questionnaire data for Group 1 and Group 2 show increases, over successive administrations of the questionnaire, in the reported frequency of use of most techniques. In only a few cases were there any decreases in the frequency of technique use. In spite of the trend toward increased frequency of technique use, the overall percentages in the very frequent use category were still fairly low.

Factors Influencing the Extent of Individualized Instruction

This section describes some of the factors that the fieldtest instructors and school principals and directors saw as positive or negative influences on the extent of individualization. First, teacher input from a needs assessment workshop and an individualization constraints questionnaire (see Appendix L) are dealt with. Next, the principal's and director's responses to a needs assessment part of a more general questionnaire (see Appendix M) are discussed.

Teacher Input

A major focus of the fourth workshop (March, 1976) was the assessment of forces working for and against the implementation of the CDS approach to individualization. Workshop participants, working in small groups, were given a list of individualization processes in the form of goal statements. Their task was to identify forces that would help them reach each goal and forces which would work against reaching the particular individualization goal. A group interaction process was used in which groups were requested to reach consensus on all forces identified. There was minimal intervention from workshop facilitators. Time limitations prevented obtaining "forces" information in great detail or on all components of the CDS approach.

Tables 119-128,* however, list forces for and against implementation of several components of the CDS approach. Note that the forces have been left in the categories the teachers were instructed to use, such as student characteristics, teacher skills, and so on. In some cases it appears a force might also be appropriate for other categories. For example, in Table 119, item number 7 under student characteristics seems also like an organizational/institutional characteristic since it involves the notion of "mandatory attendance."

Implementation of goal setting and assessment of learner characteristics were attributed the greatest number of forces, both for and against. Using performance objectives, individualized grading, pacing, and grouping all were attributed a lower number of forces than goal setting and learner characteristics. The lowest number of forces was attributed to criterion-referenced testing, contingency management, recordkeeping, and individualized use of media and materials.

There were no strong differences among the categories of forces. There were, generally, as many forces related to student characteristics as those to teacher skills, materials, or institutional factors. Not surprisingly, forces against implementation seem to have a slight edge over those for implementation.

The results of the individualization constraints questionnaire, described on page 18, are summarized in Table 129. Inspection of the totals over all individualization processes reveals time as the most frequently reported constraint. Individualization processes apparently not much constrained by time were pacing, grouping, and grading. Vocational teaching area was rarely reported as posing any special constraints on individualization. All individualization processes had five or fewer teachers marking teaching area as a constraint. Student characteristics, although rated as the second most frequent constraint overall, was more variable than the time constraint. Obtaining personal information on the student was the area where most teachers saw student characteristics as a problem. Pacing was the only other individualization process where student characteristics stood out as an obvious area of constraint. Administrative factors, lack of resources, and lack of training were rated less frequently as constraints than were student characteristics and time factors, but more frequently than vocational teaching area.

Principals' Input

Table 130 summarizes the responses of 11 fieldtest school principals or directors to selected items on a questionnaire (see Appendix M) administered at the beginning of the last quarter of the project. The questionnaire was designed, in part, to assess the views of administrators towards selected factors that might help or hinder implementation of the CDS approach to individualization. Inspection of the administrators' verbatim comments gives the impression that they are relatively optimistic about the implementation of the CDS approach to individualized instruction. They see many of the problems the fieldtest instructors saw--time and resource constraints, the need for inservice training, and some student problems. Generally, however, these administrators indicated they were in favor of competency-based individualized instruction and would support its implementation in their schools.

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*Comments in Tables 119-128 were taken verbatim from teacher worksheets, except for minor editing in some cases to make the statements readable.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the first section is a discussion of the results and the findings of the research in terms of the major objectives. This discussion focuses on the development of the theoretical framework, its processes and components, and the development and fieldtesting of the individualization criteria or guidelines. Next, there is a brief discussion of the dissemination and diffusion of the curriculum delivery system.

In the second section of the chapter, recommendations are presented regarding the implementation of the CDS approach to individualization.

Conclusions

Theoretical Framework

As indicated earlier, the central impetus for the research reported here was the need for a comprehensive curriculum delivery system for individualizing vocational-technical instruction. The first step in constructing such a system was the development of a theoretical framework which would inform and guide further efforts and also serve as an organizing structure for attempts to delineate procedural guidelines for teachers to use in their classrooms.

The development of the theoretical framework began with the curriculum model of Hilda Taba as a point of departure and focus of inquiry. Through the efforts of a state task force, a professional staff of instructional designers, and a national panel of scholars, a theoretical framework was elaborated which addresses every aspect of the vocational curriculum from the perspective of individualized, competency-based instruction. This framework, derived from a careful and systematic examination of theoretical and research literature as well as the field analysis of on-going individualization efforts, provides a coherent and inclusive context for the practical detailing of the specifics of the curriculum delivery system. The existence of such a theoretical framework clarifies and delimits the parameter around which a comprehensive and future-oriented instructional approach can be built and reduces the possibility of producing a competency-based system which is merely the re-formulation in a new idiom of conventional teaching practices.

The components and processes articulated in the theoretical framework guided the development of the individualization guidelines, of which the development and fieldtesting served, in turn, as a test of the validity and utility of those components and processes. As a result of the process of development and validation of the guidelines, the need for modification in the organization of the theoretical framework became apparent. These modifications were structural rather than substantive; in every case, the fieldtest of the individualization guidelines supported the importance and criticality of the components and processes elaborated in the theoretical framework paper.

Three major changes in the structure of the theoretical model occurred. First, the learning organization component, treated separately in the framework paper, was integrated in the procedural manual with the relevant sections where it was appropriate: in the setting and sequencing of vocational goals, in the selection and sequencing of performance objectives, and in the design and development of learning experiences. Second, the separate treatment of learning experiences and learning strategies as formulated in the theoretical framework was seen, as a consequence of the fieldtest of the procedural guidelines, to be an artificial division. As a consequence, these two components were fused into one process, the use of instructional strategies in the design and development of learning experiences. Finally, contingency management, discussed in the framework paper as one example of instructional strategies, came to be viewed as a separate component and was thus treated as such in the procedural manual.

Individualization Guidelines

The fieldtest period allowed for the progressive refinement of the guidelines for individualization and the validation of their utility to classroom teachers, in addition to the identification of key constraints on the use of specific individualization techniques.

Refinement of the guidelines. Through informal discussions with teachers on field visits and through formal teacher input at workshops and on questionnaires, the guidelines for individualization were successviely refined through four revisions, resulting in the procedural manual included as Appendix N. Both formal and informal teacher-staff interactions confirmed the importance of all the components in the CDS approach and the criticality of these components in the development of a comprehensive individualized instructional model. At no point did fieldtest teachers suggest deletion or omission of a technique or set of techniques. Of particular importance in this connection was the December 1975 workshop critique by Group 2 teachers of the then-current version of the procedural manual. As reported in the results section, this critique was extremely favorable and positive toward all components of the manual, suggesting both the validity of the guidelines and their practicality. The importance of this critique lies in the fact that this was the first encounter of Group 2 teachers with the guidelines, so that they did not have either an emotional or professional investment in them (unlike Group 1 teachers, who had been involved in shaping that version of the manual).

Revisions of the guidelines suggested by teachers centered around the mode of presentation rather than the inclusion or deletion of specific techniques. For the most part, early drafts of the procedural manual appeared too theoretically oriented, too abstract, and too academic in language to be of much practical value to vocational teachers. As a consequence, subsequent versions were rewritten to include more concrete classroom examples of techniques, to reduce the language level of the presentation, and to exclude theoretical or academic discussions wherever possible. That these changes increased the readability of the guidelines and thus made them more likely to be of practical utility is suggested by the results of the procedural manual use index, reported earlier. These results suggest that teachers read and used the manual more frequently with each new version.

One area in which teachers identified a need for more extensive treatment was in the management of individualized instruction. Emerging toward the end of the fieldtest period, this observation occurred too late for major changes to be made in the final version of the manual. It did lead to inclusion in the final product of a chapter on recordkeeping, however, and plans have since been made for the full development of guidelines for management.

Validation of the guidelines. In determining whether the guidelines were of practical utility to teachers, it was important to find out how many of the techniques teachers could use in their classrooms and how many they were already using. Data for the determination of the validity of the guidelines were obtained through self-observation reports of the teachers, through questionnaires, and through observations by project staff.

As reported in the last chapter, while there was a wide variation in the frequency of technique use and in the number of different techniques used, all techniques were used at some point by teachers in the fieldtest group, suggesting that all techniques are usable by vocational teachers.

This conclusion depends, of course, on the validity and reliability of the data. The moderate to high correlations reported between teacher self-observations and questionnaire estimates justifies confidence in the reliability of teacher-provided data. Project staff observations and discussions with teachers during the fieldtest period further fortify the validity and reliability of the data for most of the techniques under study.

It has already been noted that, despite the general indication that all techniques are valid for classroom use, there was a wide variation in the number of techniques used and in the frequency of use of specific techniques. The data indicate that a few techniques--instructor tutoring, print media, and instructor pacing, for example--were used very often, while the majority of techniques were used much less frequently. Further, individual teacher usage of techniques seemed to vary little; in other words, the individual teacher tended to follow a routine of technique usage, relying on a few techniques with which he or she presumably felt comfortable, neglecting or ignoring other techniques that might extend the range of individualization strategies at his or her disposal. The data do suggest, however, that involvement in the project had a positive effect on the frequency of use of individualization techniques by teachers. The combined questionnaire data for Group 1 and Group 2 show increases, over successive administrations of the questionnaire, in the reported frequency of use of most techniques--a trend which may reflect either a greater understanding of the various techniques or an increased commitment to individualization resulting from involvement in the project, or both.

Constraints on individualization. The variation in the number of techniques used by a given teacher and the variation in the frequency of use by teachers of given techniques is explained in part, at least, by constraints of time, resources, and training.

Time was reported as the most frequent constraint limiting teachers' use of the full array of individualization strategies. Staff observations and discussions with teachers also suggest that lack of familiarity with some techniques--formalized pre- and posttesting and contingency management, for example--constrained their broader application by many of the fieldtest teachers. Inadequate instructional or human resources impeded the use of other techniques, notably, community volunteer tutoring, proctor pacing, and non-print media. In some cases, such as the use of open-entry, open-exit sequencing and mastery/non-mastery grading, administrative constraints loomed as significant obstacles.

Administrative constraints very probably accounted for the slight difference between Group 1 and Group 2 teachers in the number and frequency of techniques used. Group 1 teachers, drawn largely from area vocational centers, adult education schools, and special needs institutions, tended to use more techniques than did Group 2 teachers, most of whom are employed in conventional high school programs.

It is important to emphasize, however, that while type of school might be an influence on the range of individualization techniques that are used, vocational teaching area apparently is not. In the investigation of constraints on individualization, it is noteworthy that subject matter taught did not emerge as a significant constraint on the use of any techniques, thus suggesting the general utility of techniques across vocational teaching areas.

When the views of teachers and principals are compared regarding constraints on individualization, the views of the two groups are not significantly different. For all techniques, teachers and principals tended to agree on what the constraints were. Significantly, neither principals nor teachers saw any constraints that were unsurmountable. By far the most important constraints overall--as seen by both teachers and principals--were lack of time for implementation, lack of training in the application of techniques, and lack of instructional resources for carrying through with many of the techniques.

Dissemination and Diffusion of the Curriculum Delivery System

A curriculum delivery system has been developed which addresses all aspects of the vocational curriculum, which has been verified as practical by exemplary vocational teachers, and which provides the basis for conversion to an individualized, competency-based instructional approach in vocational-technical education.

Efforts to disseminate and diffuse the curriculum delivery system have already begun, through the wide-range distribution of the framework paper and the procedural manual (Appendix B). The CDS approach has been given further exposure nationally through a chapter in the 1975 AVA Yearbook by B. F. Johnson describing the application of the individualization model to the education of special needs populations (Appendix O). In addition, a description of the CDS approach and the research described here was presented in a paper by B. F. Johnson and R. L. Fagan at the 1975 annual conference of the Florida Educational Research Association (Appendix P). Comprehensive exposure of the Florica vocational educational community to the CDS approach began with an article in the Florida Vocational Journal by C. T. Harrington (Appendix Q). At conferences, meetings, and in special presentations to a variety of groups, the components and processes of the CDS approach have been described and explicated, so that there is both across the state and nationally, the beginnings of an awareness of the system on the part of administrators, local educational leaders, and vocational teachers.

Continuing efforts at dissemination and diffusion include plans for another series of articles describing the various components of the model in the 1976-1977 volume of the Florida Vocational Journal and attempts to present papers on the CDS approach at a variety of state and national conferences. Training of teachers in the approach--an essential concomitant of any diffusion effort--is discussed in the following section on recommendations.

In that connection, crucial to the dissemination and diffusion of the system will be a fully articulated management system designed to instruct teachers in coordinating and allocating resources, managing individualized learning, and utilizing ancillary personnel in their classrooms and laboratories. Such a management system is currently under development and should be ready for delivery by the end of 1976.

Recommendations

To conclude this report, a few recommendations regarding the implementation of the CDS approach to individualization are given. These recommendations are based partly on theoretical grounds and partly on empirical grounds. The primary focus is on dissemination and diffusion of the CDS approach.

An assumption supported by many researchers (Houston, Jones, & Howsam, 1973) is that individualized instruction is a necessary part of competency-based instruction. Because Florida has already begun her move toward full implementation of competency-based vocational education, it is imperative that the state also begin to train vocational instructors in techniques of individualization. Without teachers well skilled in individualized instruction, Florida's efforts toward full implementation of competency-based instruction will surely fail.

The CDS approach to individualized instruction is recommended as a comprehensive and practical approach to individualization. Its various components have been implemented in a variety of vocational teaching areas and with a variety of student populations. The CDS approach to individualization is a low cost approach which includes many techniques already in use in Florida. For these reasons--practicality, cost, familiarity of many of the techniques, and the necessary part individualization plays in competency-based education--it is recommended that the state begin immediately to implement the CDS approach.

Implementation of the CDS approach, however, must involve a comprehensive statewide research and development program. Such a program would involve at least three primary areas. The first is preservice and inservice training in the CDS approach to individualization. The second woudl attempt to validate and study approaches to removing constraints which work against teachers' attempts to implement individualized instruction. The third area for research and development would be concerned with the role in dissemination and diffusion of vocational teachers in general and of those who helped develop the CDS approach in particular.

To be maximally effective, preservice and inservice training should be based on the CDS individualization model. In this way teachers may "teach the way they were taught" when they go into the classroom. In addition, this approach will be cost and time effective by exposing teacher trainees to only that part of instruction that they require. A fortunate by-product of an early training effort is that outcome and cost-effectiveness studies can begin without much delay, thus leading to early data returns and assessments of the system.

Although many of the techniques included in the CDS individualization model are relatively free of powerful constraints, such as lack of resources or administrative prohibitions, there is a need to determine empirically on a statewide basis the nature of the constraints against both individualized and competency-based instruction. Aside from being a first step toward removal of the identified constraints, such a determination would help tailor teacher training to the practical realities under which teachers operate. The identification of constraints against the implementation of individualized instruction would therefore make teacher training more efficient. And, where powerful administrative constraints are operating, would help diffusion of the CDS approach to those systems.

Final recommendations involve the use of vocational instructors in the diffusion effort. Successful efforts to disseminate the system that has been developed must address the constraints discussed earlier. Teachers must be given time for developmental activities and must as well be provided with essential training and resources for implementation of the curriculum delivery system. Where they exist, administrative obstacles to the full array of individualization techniques must be removed, through the revision of such policies as time-based student certification that impede individualization.

Attention should also be given, in dissemination and diffusion efforts, to the critical role of teachers as participants in change efforts. Through the research described here, a cadre of influential, exemplary teachers has been created which understands the system and feels a keen sense of professional ownership in it. Such a cadre can serve as an immensely effective tool in diffusing the system among vocational teachers. Use of the fieldtest teachers can occur in a variety of ways: establishing demonstration classrooms, in which fieldtest teachers provide an on-going example of the system in operation; in the development of teacher instructional materials to train other teachers in the system; in the development of student instructional materials that are compatible with the CDS approach; and in advisory councils and committees charged with diffusion of the system in local school districts.

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TABLE 1

Major Project Activities

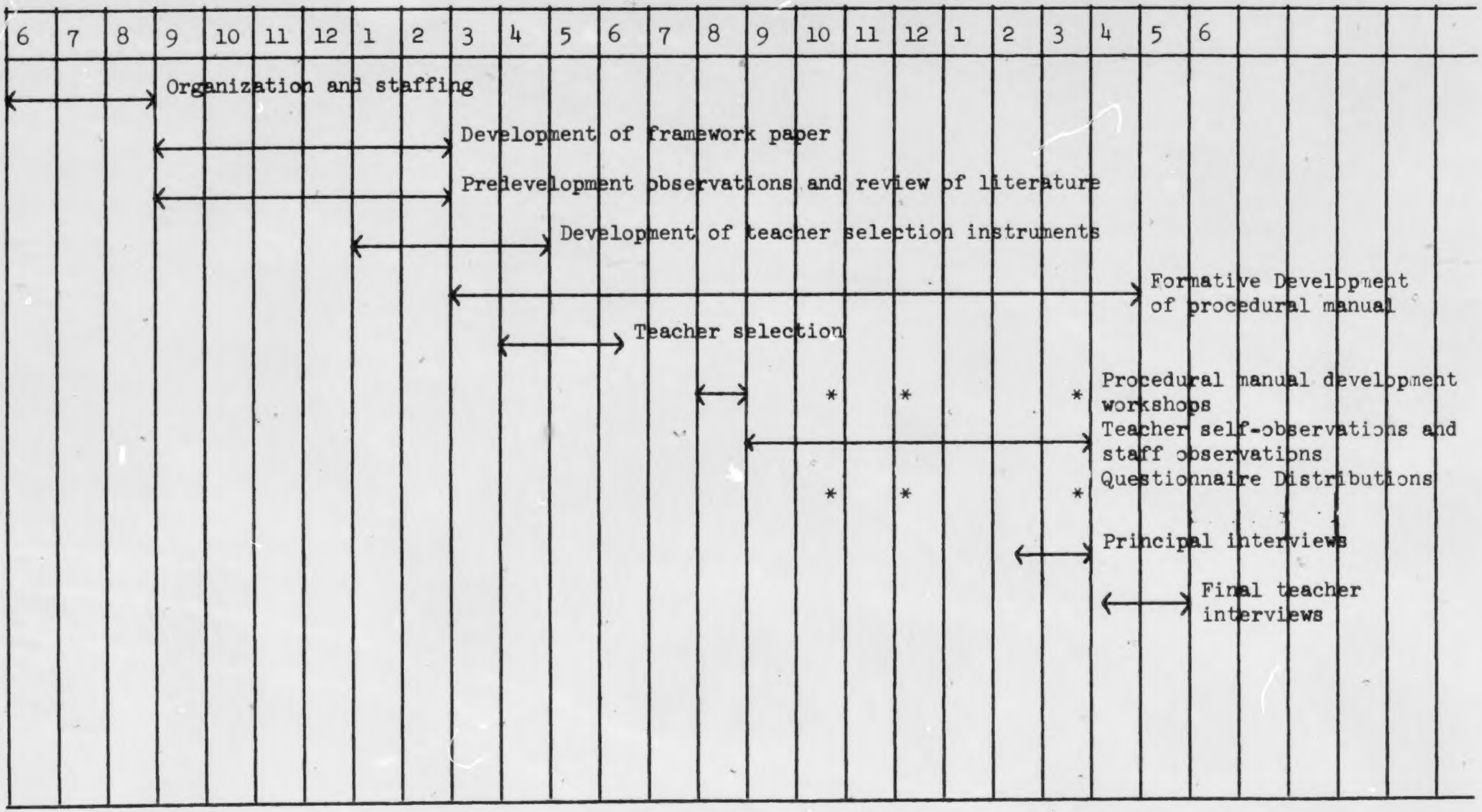

TABLE 2

BACKGROUND INFORMATION ON FIELDTEST PARTICIPANTS

Age in Years	Sex	Highest Academic Degree	Years of Teaching	Years of Work Experience	Teaching Area
GROUP 1					
Median = 43 Range = 24-64	Males = 11 Females = 14	BA/AB/BS = 11 MA/MS = 5 M.Ed = 1 No Degree = 8	Median = 6 Range = 1-29	Median = 6 Range = 1-35	Business Education = 8 Automotive Repair = 3 Health Occupations = 2 Commercial Sewing = 2 Horticulture = 2 Bldg. Construction = 2 Machine Shop = 1 Indust. Electronics = 1 Data Processing = 1 Commercial Cooking = 1 Distributive Ed. = 1 Retailing = 1
GROUP 2					
Median = 42.5 Range = 23-62	Males = 9 Females = 14	BA/BBA/BS = 12 MA/MS = 8 M.Ed. = 1 R.N. = 1 L.L.B. - 1 No Degree = 0	Median = 10 Range = 2-27	Median = 8 Range = 0-28	Business Education = 12 Distributive Ed. = 3 Child Care = 2 Home Economics = 1 Commercial Cooking = 1 Health Occupations = 1 Commercial Sewing = 1 Bldg. Construction = 1 Indus. Electronics = 1

TABLE 3

Number of Teachers in Each Participating School

GROUP 1		GROUP 2	
School	No. of Teachers	School	No. of Teachers
Beggs Educational Center (Pensacola)	4	Boca Ciega High (St. Petersburg)	2
City Center for Learning (St. Petersburg)	4	Clearwater High (Clearwater)	1
Manatee Area Vocationa-Technical Center (Bradenton)	2	Dunedin High (Dunedin)	1
Mid-Florida Technical Institute (Orlando)	2	Edgewater High (Orlando)	2
Sarasota Vocational-Technical Center (Sarasota)	2	Jones High (Orlando)	2
Tampa Bay Vocational-Technical Center (Tampa)	2	Manatee High (Bradenton)	1
Tomlinson Adult Education Center (St. Petersburg)	2	Orange County Vocational School (Orlando)	2
Washington-Holmes Area Vocational-Technical Center (Chipley)	2	Pensacola High (Pensacola)	2
Westside Adult Education Center (Winter Garden)	3	Plant City High (Plant City)	1
Wymore Career Education Center (Orlando)	2	Sarasota High (Sarasota)	1
		Sarasota County Student Center (Sarasota)	2
		St. Petersburg High (St. Petersburg)	1
		Winter Park High (Winter Park)	2
		Woodham High (Pensacola)	3

TABLE 4

PERCENT OF RESPONSES BY GROUP 1 TEACHERS TO EACH ITEM ON PROCEDURAL MANUAL USE INDEX (FIRST DRAFT) INDICATING THE EXTENT TO WHICH THEY READ, REVIEWED, OR CRITIQUED EACH SECTION OF THE MANUAL

SECTION TITLES	RESPONSE CATEGORIES									
	0[a]	1	2	3	4	5	6	7	8	9
Setting Individual Goals	8[b]	12	32	20	4	16	4	0	0	4
Selecting and Analyzing Performance Objectives	8	24	24	4	8	4	8	8	4	8
Developing and Administering CRT's	8	40	24	12	0	8	0	4	4	0
Determining Media Requirements	8	20	24	12	12	4	16	4	0	0
Reviewing, Selecting, and Adapting Instructional Materials	8	28	20	8	4	8	8	12	4	0
Sequencing Instruction	8	52	12	4	0	12	0	12	0	0
Using Learning Strategies	8	32	16	8	12	12	8	4	0	0
Applying Contingency Management	8	28	24	16	8	0	4	12	0	0
Applying Pacing Alternatives	8	44	8	8	0	8	12	12	0	0
Applying Tutoring Alternatives	8	36	12	8	8	4	12	8	4	0
Conducting Internal Evaluation	8	36	20	8	4	12	4	0	4	4
Conducting External Evaluation	8	36	28	4	4	12	4	0	4	0
Glossary	8	24	28	0	12	16	0	0	8	4

[a] "0" indicates no response, "1" indicates the section was never read, "5" indicates a moderate amount of time was spent on the section, "9" indicates the section was read very frequently.

[b] All numbers are percents based on an N of (25).

TABLE 5

PERCENT OF RESPONSES BY GROUP 1 TEACHERS TO EACH ITEM ON PROCEDURAL MANUAL USE INDEX (SECOND DRAFT) INDICATING THE EXTENT TO WHICH THEY READ, REVIEWED, OR CRITIQUED EACH SECTION OF THE MANUAL

SECTION TITLES	RESPONSE CATEGORIES									
	0[a]	1	2	3	4	5	6	7	8	9
Goals	5[b]	0	5	35	15	20	0	15	0	5
How PO & CRT's Can Be Used to Individualize Instruction	0	0	10	20	20	30	30	10	5	0
How a Catalog of Objectives Can Help Validate Course Objectives	5	5	15	30	0	25	10	5	5	0
How Performance Objectives Can be Analyzed for Instructional Development	5	5	15	10	20	30	5	5	5	0
How to Write Performance Objectives	0	5	15	10	15	30	10	10	0	5
How to Write Criterion-Referenced Tests	0	5	25	15	10	15	15	10	0	5
Using Different Learning Experiences	0	5	15	0	10	40	5	15	10	0
Selecting Media	0	10	15	5	15	30	10	0	15	0
Reviewing & Selecting Existing Instructional Materials	5	15	15	5	10	30	10	0	5	5
Using Learning Strategies in Instructional Development	0	20	10	15	10	10	15	10	10	0
Behavior Modification	0	20	10	20	15	10	5	10	5	5
Tutoring	0	5	20	25	10	30	5	5	0	0
Pacing	0	10	10	30	10	20	10	10	0	0
Using Learning Strategies in Vocational-Technical Instruction	0	10	10	15	15	25	5	0	15	5
Evaluating Individualized Instruction	0	5	15	5	5	25	25	10	10	0

[a] "0" indicates no response, "1" indicates the section was never read, "5" indicates a moderate amount of time was spent on the section, "9" indicates the section was read very frequently.

[b] All numbers are percents based on an N of (20).

TABLE 6

PERCENT OF RESPONSES BY GROUP 1 TEACHERS TO EACH ITEM ON PROCEDURAL MANUAL USE INDEX (THIRD DRAFT) INDICATING THE EXTENT TO WHICH THEY READ, REVIEWED, OR CRITIQUED EACH SECTION OF THE MANUAL

SECTION TITLES	RESPONSE CATEGORIES									
	0[a]	1	2	3	4	5	6	7	8	9
Goals-Overview	0[b]	15	0	23	15	31	0	15	0	0
Obtaining Personal Information on the Student	0	15	0	8	39	0	8	15	8	8
Presenting Job-Related Information to the Student	0	8	0	15	15	23	15	8	15	0
Obtaining Information on the Job Market	0	8	8	15	23	15	8	15	8	0
Sequencing Short-Term Goals	0	8	0	46	31	0	0	8	0	8
PO's, CRT's, and Individualized Instruction	0	8	0	8	31	23	0	15	8	8
How to Use PO's and CRT's to Individualize Instruction	0	15	0	0	15	46	0	15	0	8
How a Catalogue of Objectives Can Help Validate Course Objectives	0	15	8	15	23	8	8	23	0	0
How PO's Can be Analyzed for Instructional Development	8	15	0	8	23	8	15	15	8	0
How to Write CRT's	0	15	0	15	23	23	0	23	0	0
Using Different Learning Experiences	0	15	0	15	15	15	8	8	8	15
Selecting Media	0	15	0	0	15	54	8	0	8	0
Reviewing, Selecting, and Adapting Materials	0	15	0	0	8	54	15	8	0	0
Using Learning Strategies in Instructional Development	0	15	8	23	23	23	0	8	0	0

TABLE 6 - continued

PERCENT OF RESPONSES BY GROUP 1 TEACHERS TO EACH ITEM ON PROCEDURAL MANUAL USE INDEX (THIRD DRAFT) INDICATING THE EXTENT TO WHICH THEY READ, REVIEWED, OR CRITIQUED EACH SECTION OF THE MANUAL

SECTION TITLES	RESPONSE CATEGORIES									
	0	1	2	3	4	5	6	7	8	9
Behavior Modification	0	23	8	15	23	15	15	0	0	0
Tutoring	0	15	15	23	15	8	8	8	0	8
Pacing	0	8	46	15	8	15	0	8	0	0
Using Learning Strategies in the Vocational-Technical Laboratory	0	15	23	15	7	15	7	0	7	7
Evaluating Individualized Instruction	0	15	0	0	23	30	7	7	7	0

[a] "0" indicates no response, "1" indicates the section was never read, "5" indicates a moderate amount of time was spent on the section, "9" indicates the section was read very frequently.

[b] All numbers are percents based on an N of (13)

TABLE 7

PERCENT OF RESPONSES BY GROUP 2 TEACHERS TO EACH ITEM ON PROCEDURAL MANUAL USE INDEX (THIRD DRAFT) INDICATING THE EXTENT TO WHICH THEY READ, REVIEWED, OR CRITIQUED EACH SECTION OF THE MANUAL

SECTION TITLES	RESPONSE CATEGORIES									
	0[a]	1	2	3	4	5	6	7	8	9
Goals-Overview	5[b]	0	15	10	0	30	10	15	10	5
Obtaining Personal Information on the Student	10	0	10	15	5	20	15	5	15	5
Presenting Job-Related Information to the Student	5	5	5	20	5	25	10	5	5	15
Obtaining Information on the Job Market	5	10	5	15	10	20	10	15	5	5
Sequencing Short-Term Goals	5	5	0	10	30	35	5	10	0	0
PO's, CRT's, and Individualized Instruction	5	0	0	10	20	25	20	0	10	10
How to Use PO's and CRT's to Individualize Instruction	5	5	0	20	15	20	20	5	10	5
How a Catalogue of Objectives Can Help Validate Course Objectives	5	5	10	15	10	30	5	10	10	0
How PO's Can be Analyzed for Instructional Development	5	5	0	20	20	30	10	10	0	0
How to Write CRT's	5	5	5	20	10	20	5	20	5	5
Using Different Learning Experiences	5	0	5	10	0	20	10	20	20	10
Selecting Media	5	0	0	15	0	25	10	20	20	5
Reviewing, Selecting, and Adapting Materials	5	0	10	10	15	35	5	15	0	5
Using Learning Strategies in Instructional Development	5	0	0	15	20	35	5	15	0	5
Behavior Modification	5	0	25	5	15	20	20	5	0	5

TABLE 7 - continued

PERCENT OF RESPONSES BY GROUP 2 TEACHERS TO EACH ITEM ON PROCEDURAL MANUAL USE INDEX (THIRD DRAFT) INDICATING THE EXTENT TO WHICH THEY READ, REVIEWED, OR CRITIQUED EACH SECTION OF THE MANUAL

SECTION TITLES	RESPONSE CATEGORIES									
	0	1	2	3	4	5	6	7	8	9
Tutoring	5	0	5	10	10	20	10	10	10	20
Pacing	5	5	10	10	10	35	0	5	10	10
Using Learning Strategies in the Vocational-Technical Laboratory	5	5	10	21	5	26	0	15	5	5
Evaluating Individualized Instruction	10	5	0	5	10	26	5	15	10	10

[a] "0" indicates no response, "1" indicates the section was never read, "5" indicates a moderate amount of time was spent on the section, "9" indicates the section was read very frequently.

[b] All numbers are percents based on an N of (20).

TABLE 8

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 1 TEACHERS

QUESTIONNAIRE ITEM	SELF-REPORT ITEM					
	Week1	N	Prob.	Total (Week1-Week7)	N	Prob.
Long-Term Goal Setting	-.06	19	NS	.12	23	NS
Short-Term Goal Setting	.04	19	NS	.19	23	NS
Use of Performance Objectives	.34	19	.073	.41	23	.025
Use of Unit Pretesting	.46	19	.023	.43	23	.018
Use of Lesson Pretesting	.19	19	NS	.29	23	.089
Prescription of Instruction Following Posttest Mastery	.45	19	.026	.36	23	.044
Prescription of Instruction Following Posttest Nonmastery	.55	19	.007	.46	23	.012
Use of Print Media	.46	19	.023	.45	23	.014
Use of Audio Media	.54	19	.007	.53	23	.004
Use of Still Visuals	.40	19	.041	.20	23	NS
Use of Human Resources	-	-	-	.39	23	.030
Use of Motion Visuals	.39	19	.046	.05	23	NS
Use of Actual Objects	.47	19	.019	.44	23	.017
Variation of Instructional Events	.23	19	NS	.19	23	NS
Use of Peer Tutoring	.24	19	NS	.14	23	NS
Instructor Tutoring	-.05	19	NS	.34	23	.055
Use of Advanced Student Tutoring	.49	19	.015	.47	23	.012
Use of Community Volunteer Tutoring	-.11	19	NS	.46	23	.012
Instructor Pacing	.35	19	.069	.30	23	.080

TABLE 8 - continued

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 1 TEACHERS

QUESTIONNAIRE ITEM	SELF-REPORT ITEM					
	WEEK1	N	Prob.	Total (Week1-Week7)	N	Prob.
Student Pacing	.41	19	.039	.41	23	.024
Instructor-Student Pacing	.39	19	.049	.43	23	.020
Proctor-Student Pacing	-	-	-	.48	23	.009
Use of Contingency Management	.48	19	.017	.38	23	.037
Short-Term Goal Sequencing	-.27	19	NS	-.07	23	NS
Sequencing of Unit Objectives	.33	19	.082	.29	23	.088
Sequencing of Lessons	.44	18	.031	.22	23	NS

*Questionnaire estimates (IIQ1) of technique use were indicated on a 9-point scale going from "never used" to "used very frequently." Self-report estimates were indicated on a daily observation form on which teachers check-marked those techniques used at least once on that day. The range for each technique can vary from 0 to 5 days a week.

TABLE 9

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 2 TEACHERS

	SELF-REPORT ITEM					
QUESTIONNAIRE ITEM	Week1	N	Prob.	Total (Week1-Week7)	N	Prob.
Long-Term Goal Setting	.08	22	NS	.52	23	.005
Short-Term Goal Setting	-.03	22	NS	.17	23	NS
Use of Performance Objectives	.43	22	.020	.41	23	.025
Use of Unit Pretesting	.29	22	.094	.23	23	NS
Use of Lesson Pretesting	.15	22	NS	.21	23	NS
Prescription of Instruction Following Posttest Mastery	.11	22	NS	.16	23	NS
Prescription of Instruction Following Posttest Nonmastery	.11	22	NS	.12	23	NS
Use of Print Media	.55	22	.004	.66	23	.001
Uze of Audio Media	.08	22	NS	.20	23	NS
Use of Still Visuals	.41	22	.028	.47	23	.011
Use of Human Resources	.45	22	.017	.46	23	.013
Use of Motion Visuals	.29	22	.089	.68	23	.001
use of Actual Objects	.66	22	.001	.67	23	.001
Variation of Instructional Events	.28	22	NS	.30	23	.082
Use of Peer Tutoring	.04	22	NS	.42	23	.021
Instructor Tutoring	.00	22	NS	.06	23	NS
Use of Advanced Student Tutoring	.17	20	NS	.51	23	.006
Use of Community Volunteer Tutoring	-.11	20	NS	.03	23	.429
Instructor Pacing	-.12	20	NS	.33	23	.060

TABLE 9 - continued

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 2 TEACHERS

QUESTIONNAIRE ITEM	SELF-REPORT ITEM					
	Week1	N	Prob.	Total (Week1-Week7)	N	Prob
Student Pacing	.46	20	.019	.45	23	.014
Instructor-Student Pacing	.42	20	.029	.26	23	.107
Proctor-Student Pacing	.36	20	.056	.05	23	NS
Use of Contingency Management	-.10	20	NS	.42	23	.023
Short-Term Goal Sequencing	.35	20	.062	.21	23	NS
Sequencing of Unit Objectives	.18	20	NS	.38	23	.035
Sequencing of Lessons	.09	20	NS	.22	23	NS

*Questionnaire estimates (IIQ1) of technique use were indicated on a 9-point scale going from "never used" to "used very frequently." Self-report estimates were indicated on a daily observation form on which teachers check-marked those techniques used at least once on that day. The range for each technique can vary from 0 to 5 days a week.

TABLE 10

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 1 TEACHERS

	SELF-REPORT ITEM					
QUESTIONNAIRE ITEM	Week7	N	Prob.	Total (Week1-Week7)	N	Prob.
Long-Term Goal Setting	.20	10	NS	-.05	23	NS
Short-Term Goal Setting	.25	10	NS	.34	23	.056
Use of Performance Objectives	.15	10	NS	.18	23	NS
Use of Unit Pretesting	.75	10	.006	.51	23	.006
Use of Lesson Pretesting	-.06	10	NS	-.04	23	NS
Prescription of Instruction Following Posttest Mastery	.60	10	.033	.49	23	.008
Prescription of Instruction Following Posttest Nonmastery	.38	10	NS	.45	23	.014
Use of Print Media	.46	10	.088	.12	23	NS
Use of Audio Media	.51	10	.065	.46	23	.014
Use of Still Visuals	.55	10	.047	.60	23	.001
Use of Human Resources	.27	10	NS	.39	23	.033
Use of Motion Visuals	.20	10	NS	-.18	23	NS
Use of Actual Objects	.37	10	NS	.29	23	.087
Variation of Instructional Events	.19	10	NS	.20	23	NS
Use of Peer Tutoring	.45	10	.091	.51	23	.006
Instructor Tutoring	.62	10	.026	.40	23	.029
Use of Advanced Student Tutoring	.54	10	.052	.28	23	.093
Use of Community Volunteer Tutoring	.64	10	.022	.55	23	.003
Instructor Pacing	.35	10	NS	.37	23	.038

TABLE 10 - continued

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 1 TEACHERS

	SELF-REPORT ITEM					
QUESTIONNAIRE ITEM	Week7	N	Prob.	Total (Week1-Week7)	N	Prob.
Student Pacing	.73	10	.008	.66	23	.001
Instructor-Student Pacing	.46	10	.090	.53	23	.005
Proctor-Student Pacing	-	-	-	-.26	23	NS
Use of Contingency Management	-	-	-	.71	23	NS
Short-Term Goal Sequencing	.83	10	.001	.33	23	.060
Sequencing of Unit Objectives	.74	10	.006	.25	23	NS
Sequencing of Lessons	.76	10	.005	.53	23	.005

*Questionnaire estimates (IIQ2) of technique use were indicated on a 9-point scale going from "never used" to "used very frequently." Self-report estimates were indicated on a daily observation form on which teachers check-marked those techniques used at least once on that day. The range for each technique can vary from 0 to 5 days a week.

TABLE 11

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 2 TEACHERS

QUESTIONNAIRE ITEM	SELF-REPORT ITEM					
	Week7	N	Prob.	Total (Week1-Week7)	N	Prob.
Long-Term Goal Setting	.43	20	.029	.55	23	.003
Short-Term Goal Setting	.23	20	NS	.48	23	.010
Use of Performance Objectives	.49	20	.013	.44	23	.018
Use of Unit Pretesting	.30	20	.093	.26	23	NS
Use of Lesson Pretesting	.06	20	NS	-.03	23	NS
Prescription of Instruction Following Posttest Mastery	.35	20	.061	.30	23	.080
Prescription of Instruction Following Posttest Nonmastery	.11	20	NS	.10	23	NS
Use of Print Media	.45	20	.022	.28	23	.096
Use of Audio Media	.41	20	.034	.47	23	.011
Use of Still Visuals	.33	20	.074	.58	23	.002
Use of Human Resources	.59	20	.003	.42	23	.022
Use of Motion Visuals	.40	20	.040	.59	23	.001
Use of Actual Objects	.59	20	.003	.47	23	.010
Variation of Instructional Events	.13	20	NS	.16	23	NS
Use of Peer Tutoring	.30	20	.095	.40	23	.026
Instructor Tutoring	.21	20	NS	.41	23	.025
Use of Advanced Student Tutoring	.57	19	.005	.62	23	.001
Use of Community Volunteer Tutoring	-	-	-	.17	23	NS

TABLE 11 - continued

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 2 TEACHERS

QUESTIONNAIRE ITEM	SELF-REPORT ITEM					
	Week7	N	Prob.	Total (Week1-Week7)	N	Prob.
Instructor Pacing	.20	19	NS	.07	23	NS
Student Pacing	.11	19	NS	.08	23	NS
Instructor-Student Pacing	.12	19	NS	.19	23	NS
Proctor-Student Pacing	.58	19	.005	.46	23	.013
Use of Contingency Management	.27	18	NS	.10	23	NS
Short-Term Goal Sequencing	.35	18	.076	.06	23	NS
Sequencing of Unit Objectives	.11	18	NS	.54	23	.004
Sequencing of Lessons	.24	18	NS	.32	23	.065

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*Questionnaire estimates (IIQ2) of technique use were indicated on a 9-point scale going from "never used" to "used very frequently." Self-report estimates were indicated on a daily observation form on which teachers check-marked those techniques used at least once on that day. The range for each technique can vary from 0 to 5 days a week.

TABLE 12

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 1 TEACHERS

	SELF-REPORT ITEM					
QUESTIONNAIRE ITEM	Week17	N	Prob.	Total (Week8-Week18)	N	Prob.
Long-Term Goal Setting	.13	11	NS	.39	22	.034
Short-Term Goal Setting	.44	11	.085	.41	22	.029
Use of Performance Objectives	.68	11	.010	.52	22	.006
Use of Unit Pretesting	.87	11	.001	.72	22	.001
Use of Lesson Pretesting	.80	11	.001	.61	22	.001
Prescription of Instruction Following Posttest Mastery	.16	11	NS	.29	22	.089
Prescription of Instruction Following Posttest Nonmastery	.79	11	.002	.51	22	.007
Use of Print Media	-.07	11	NS	.40	22	.030
Use of Audio Media	.62	11	.020	.57	22	.003
Use of Still Visuals	.56	11	.035	.53	22	.005
Use of Human Resources	.24	11	NS	.44	22	.018
Use of Motion Visuals	.43	11	.089	.38	22	.038
Use of Actual Objects	.11	11	NS	.26	22	NS
Variation of Instructional Events	.11	11	NS	.51	22	.007
Use of Peer Tutoring	.72	11	.006	.50	22	.008
Instructor Tutoring	.66	11	.013	.41	22	.027
Use of Advanced Student Tutoring	-.20	11	NS	.30	22	.086
Use of Community Volunteer Tutoring	-.06	11	NS	-.00	22	NS
Instructor Pacing	.68	11	.009	.40	22	.032

TABLE 12 - continued

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 1 TEACHERS

QUESTIONNAIRE ITEM	SELF-REPORT ITEM					
	Week17	N	Prob.	Total (Week8-Week18)	N	Prob.
Student Pacing	.05	11	NS	.23	22	NS
Instructor-Student Pacing	.60	11	.024	.42	22	.023
Proctor-Student Pacing	-	-	-	.19	22	NS
Use of Contingency Management	.83	11	.001	.55	22	.003
Short-Term Goal Sequencing	.65	11	.014	.49	22	.010
Sequencing of Unit Objectives	.51	11	.053	.45	22	.016
Sequencing of Lessons	.60	11	.023	.53	22	.005

*Questionnaire estimates (IIQ3) of technique use were indicated on a 9-point scale going from "never used" to "used very frequently." Self-report estimates were indicated on a daily observation form on which teachers check-marked those techniques used at least once on that day. The range for each technique can vary from 0 to 5 days a week.

TABLE 13

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 2 TEACHERS

	SELF-REPORT ITEM					
QUESTIONNAIRE ITEM	Week17	N	Prob.	Total (Week8-Week18	N	Prob.
Long-Term Goal Setting	.38	21	.040	.41	23	.025
Short-Term Goal Setting	.65	21	.001	.43	23	.019
Use of Performance Objectives	.65	21	.001	.35	23	.051
Use of Unit Pretesting	.56	21	.004	.46	23	.012
Use of Lesson Pretesting	.42	21	.029	.40	23	.028
Prescription of Instruction Following Posttest Mastery	.43	21	.025	.36	23	.043
Prescription of Instruction Following Posttest Nonmastery	.41	21	.031	.40	23	.029
Use of Print Media	.52	21	.008	.56	23	.002
Use of Audio Media	.33	21	.066	.45	23	.016
Use of Still Visuals	.66	21	.001	.54	23	.004
Use of Human Resources	.71	21	.001	.63	23	.001
Use of Motion Visuals	.52	21	.007	.50	23	.007
Use of Actual Objects	.56	21	.004	.54	23	.003
Variation of Instructional Events	.21	21	NS	.22	23	NS
Use of Peer Tutoring	.35	21	.058	.43	23	.020
Instructor Tutoring	.03	21	NS	-.21	23	NS
Use of Advanced Student Tutoring	-.15	21	NS	-.09	23	NS
Use of Community Volunteer Tutoring	.66	21	.001	.51	23	.006
Instructor Pacing	.18	21	NS	.12	23	NS

TABLE 13 - continued

PRODUCT-MOMENT CORRELATIONS BETWEEN QUESTIONNAIRE ESTIMATES AND SELF-REPORT ESTIMATES OF THE FREQUENCY* OF TECHNIQUE USE BY GROUP 2 TEACHERS

QUESTIONNAIRE ITEM	SELF-REPORT ITEM					
	Week17	N	Prob.	Total (Week8-Week18	N	Prob.
Student Pacing	.55	21	.005	.59	23	.001
Instructor-Student Pacing	.15	21	NS	.25	23	NS
Proctor-Student Pacing	.16	21	NS	.35	23	.048
Use of Contingency Management	.42	21	.027	.48	23	.010
Short-Term Goal Sequencing	.60	21	.002	.51	23	.006
Sequencing of Unit Objectives	.53	21	.007	.37	23	.038
Sequencing of Lessons	.53	21	.006	.48	23	.010

*Questionnaire estimates (IIQ3) of technique use were indicated on a 9-point scale going from "never used" to "used very frequently." Self-report estimates were indicated on a daily observation form on which teachers check-marked those techniques used at least once on that day. The range for each technique can vary from 0 to 5 days a week.

TABLE 14

MEDIAN NUMBER OF DIFFERENT INDIVIDUALIZATION TECHNIQUES*

		WEEK																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
GROUP 1 TEACHERS	MEDIAN	8	9	8	7	7	8	10	10.5	10	8.5	11	8	8.5	10	8	6	9	7
	N	22	23	21	17	17	8	6	16	16	16	14	17	10	9	11	10	11	8
GROUP 2 TEACHERS	MEDIAN	7	7	7	6	6	9	7.5	7.5	7	7	7	7	7	7.5	9	8	8	7.5
	N	21	20	19	19	17	17	16	20	21	23	23	22	23	20	21	21	22	16

*Medians were calculated from teacher self-observation data.

TABLE 15
LONG-TERM GOAL SETTING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	11	13	12	13	14	10	8	8	11	10	3	12	7	6	7	8	6	3
Used on One Day	4	2	4	2	2	3	1	2	3	4	5	4	3	3	1	2	1	1
Used on Two Days	3	4	2	0	1	0	1	1	2	1	3	1	0	0	1	0	1	1
Used on Three Days	0	0	1	0	0	1	0	0	0	0	2	0	0	0	1	0	1	0
Used on Four Days	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0
Used on Five Days	0	1	1	0	1	1	0	1	1	0	1	0	0	0	1	0	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	16	15	16	17	12	13	13	13	14	15	15	13	12	15	14	12	11	11
Used on One Day	4	2	0	2	6	3	3	2	4	4	4	6	8	1	5	4	4	3
Used on Two Days	1	3	1	1	0	1	0	5	2	2	1	0	0	1	1	2	2	0
Used on Three Days	0	0	0	1	0	2	4	1	0	1	0	0	0	0	0	0	2	0
Used on Four Days	1	0	1	0	2	2	0	0	0	1	0	1	1	0	0	1	0	0
Used on Five Days	0	2	3	0	1	2	2	2	1	0	3	2	2	2	1	1	1	2

*Data compiled from teacher's self-observation forms.

TABLE 16

SHORT-TERM GOAL SETTING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	11	11	8	9	9	9	6	5	8	5	4	10	4	3	6	8	4	3
Used on One Day	4	5	8	4	5	2	2	4	4	4	4	2	3	2	1	1	2	1
Used on Two Days	3	3	2	1	3	1	2	3	1	2	3	4	1	3	1	1	2	0
Used on Three Days	0	0	2	1	2	1	0	1	3	2	2	1	1	1	2	0	2	1
Used on Four Days	0	1	0	0	1	2	0	0	1	1	0	0	0	0	1	1	0	0
Used on Five Days	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	11	15	12	12	12	12	12	10	13	16	15	13	15	11	15	10	12	11
Used on One Day	5	0	3	5	1	5	3	7	2	3	2	6	3	5	2	5	4	2
Used on Two Days	2	2	2	4	2	2	2	2	2	2	1	1	1	1	3	1	1	0
Used on Three Days	1	3	2	0	4	2	1	3	3	0	3	0	2	1	1	4	2	2
Used on Four Days	1	2	2	0	0	1	1	1	1	2	0	1	0	0	0	0	0	0
Used on Five Days	2	0	0	0	2	1	1	0	0	0	2	1	2	1	0	0	1	1

*Data compiled from teacher's self-observation forms.

TABLE 17
USE OF PERFORMANCE OBJECTIVES

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE HAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	15	14	10	12	11	12	7	7	11	7	7	11	6	5	7	10	5	5
Used on One Day	1	4	7	1	1	1	1	3	3	5	4	2	1	2	1	0	2	0
Used on Two Days	2	1	0	1	1	0	0	1	0	1	1	3	1	0	0	0	1	0
Used on Three Days	0	0	1	1	2	0	0	1	2	1	1	1	0	1	0	0	1	0
Used on Four Days	0	0	1	0	0	0	1	0	0	1	1	0	1	0	2	0	0	0
Used on Five Days	1	1	1	0	3	2	1	1	1	0	0	0	1	1	1	1	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	13	17	14	16	14	16	12	15	13	17	17	18	17	14	15	11	13	8
Used on One Day	4	2	3	3	1	2	4	5	5	2	2	1	2	3	3	3	3	2
Used on Two Days	1	1	0	0	2	1	1	1	1	2	0	1	1	1	2	3	0	3
Used on Three Days	1	0	2	2	2	1	2	1	0	1	0	0	2	1	0	1	0	1
Used on Four Days	1	2	2	0	1	1	1	0	0	1	2	1	1	0	1	1	2	1
Used on Five Days	2	0	0	0	1	2	0	1	2	0		1	0	0	0	1	2	1

*Data compiled from teacher's self-observation forms.

TABLE 18

USE OF UNIT PRETESTING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	17	18	19	14	17	12	7	9	15	11	11	14	8	7	10	9	8	4
Used on One Day	1	1	0	1	0	0	0	1	1	1	1	1	1	1	0	1	0	0
Used on Two Days	0	0	0	0	0	2	0	1	0	1	1	2	0	0	0	0	0	1
Used on Three Days	0	1	0	0	1	0	1	2	0	1	0	0	1	1	0	0	0	0
Used on Four Days	1	0	0	0	0	0	1	0	1	1	1	0	0	0	1	0	2	0
Used on Five Days	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	17	20	19	1	18	20	16	20	20	20	21	18	20	16	18	17	17	13
Used on One Day	1	1	2	1	1	1	2	1	0	2	0	1	1	2	0	0	1	1
Used on Two Days	3	0	0	1	2	1	1	1	0	1	2	1	1	1	0	1	2	0
Used on Three Days	0	1	0	1	0	1	0	0	1	0	0	2	1	0	1	2	0	1
Used on Four Days	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1
Used on Five Days	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0

*Data compiled from teacher's self-observation forms.

TABLE 19
USE OF LESSON PRETESTING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	15	16	17	12	14	14	8	9	12	9	10	10	6	6	10	9	8	4
Used on One Day	2	4	1	2	1	1	1	2	1	3	1	3	2	2	0	0	0	0
Used on Two Days	1	0	1	0	2	0	1	1	2	2	1	2	0	1	0	0	0	1
Used on Three Days	1	0	0	1	0	0	0	1	0	0	1	1	0	0	0	0	1	0
Used on Four Days	0	0	0	0	0	0	0	0	2	1	0	1	1	0	1	1	1	0
Used on Five Days	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	17	17	13	18	15	16	16	19	16	20	20	19	20	14	15	18	13	14
Used on One Day	2	2	2	2	3	4	1	2	2	2	1	0	1	4	2	0	3	0
Used on Two Days	1	3	4	1	1	3	3	0	2	0	2	1	1	0	2	0	2	2
Used on Three Days	1	0	1	0	1	0	0	1	0	1	0	2	1	0	1	1	0	0
Used on Four Days	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0
Used on Five Days	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0

*Data compiled from teacher's self-observation forms.

TABLE 20

PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST MASTERY

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	8	12	8	6	6	6	6	5	8	6	6	9	4	5	5	7	5	2
Used on One Day	2	1	4	4	5	2	1	2	3	5	3	1	1	0	1	1	0	1
Used on Two Days	1	2	2	2	2	2	1	1	1	0	2	3	1	0	0	1	0	0
Used on Three Days	4	3	2	3	2	3	1	2	1	1	1	1	1	3	2	0	1	2
Used on Four Days	3	1	2	0	0	0	0	1	2	3	0	2	2	1	2	1	1	0
Used on Five Days	1	1	2	0	5	2	1	2	2	0	2	1	1	0	1	1	3	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	12	14	13	13	13	11	10	17	13	13	15	11	15	10	14	10	9	7
Used on One Day	3	3	3	3	2	5	3	3	2	3	4	6	1	2	0	3	4	3
Used on Two Days	2	4	4	3	2	1	4	0	2	3	1	2	3	4	2	2	4	4
Used on Three Days	4	1	1	2	2	2	0	2	3	2	0	0	2	1	2	2	1	0
Used on Four Days	0	0	0	0	1	2	1	0	1	1	1	0	0	1	1	1	0	1
Used on Five Days	1	0	0	0	1	2	2	1	0	1	2	5	2	1	2	2	2	1

*Data compiled from teacher's self-observation forms.

TABLE 21

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:

PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST NONMASTERY

GROUP 1

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	11	14	12	9	11	11	5	8	9	11	6	10	4	5	5	7	8	4
Used on One Day	4	2	3	5	4	2	2	3	3	2	5	4	4	2	4	0	0	1
Used on Two Days	3	3	3	0	0	1	0	1	4	0	1	2	0	0	0	1	0	0
Used on Three Days	0	0	0	1	1	0	1	0	1	1	1	1	1	1	1	0	1	0
Used on Four Days	0	1	0	0	0	0	1	1	0	0	0	0	1	0	1	2	1	0
Used on Five Days	1	0	2	0	2	1	1	0	0	1	1	0	0	1	0	1	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	14	15	13	15	13	18	12	15	14	15	12	16	15	11	15	13	11	10
Used on One Day	5	2	4	3	6	3	3	5	2	5	5	2	6	3	1	2	4	3
Used on Two Days	1	3	3	3	1	1	1	1	1	2	4	0	1	3	3	2	4	0
Used on Three Days	1	2	1	0	1	0	2	0	3	1	1	2	1	0	1	3	0	2
Used on Four Days	1	0	0	0	0	1	1	0	0	0	1	1	0	2	0	0	0	0
Used on Five Days	0	0	0	0	0	0	1	2	1	0	0	1	0	0	1	0	1	1

*Data compiled from teacher's self-observation forms.

NUMBER OF TEACHERS
REPORTING THE
TECHNIQUE WAS:

TABLE 22
USE OF PRINT MEDIA

GROUP 1

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	7	5	5	3	5	5	4	1	5	4	1	5	4	3	2	4	1	0
Used on One Day	2	4	3	2	4	2	0	3	2	4	2	1	0	0	1	1	2	0
Used on Two Days	3	2	2	4	0	1	1	1	1	0	2	4	1	0	0	1	1	0
Used on Three Days	1	1	1	6	2	1	0	1	3	2	1	0	0	2	0	1	1	2
Used on Four Days	3	4	0	0	0	0	1	2	1	4	2	1	2	1	4	1	2	0
Used on Five Days	3	4	9	0	7	6	4	5	5	1	6	6	3	3	4	3	3	3

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	14	13	10	12	9	8	11	14	9	10	10	9	9	9	9	8	5	6
Used on One Day	1	0	3	3	1	5	2	2	3	3	0	2	3	2	1	3	1	2
Used on Two Days	0	0	3	3	2	1	1	0	2	4	5	2	3	0	2	1	5	2
Used on Three Days	2	2	1	3	1	1	2	3	3	3	5	3	1	3	2	2	3	4
Used on Four Days	2	5	1	0	2	5	2	1	2	3	0	0	2	3	4	1	1	1
Used on Five Days	3	2	3	0	6	3	2	4	2	0	3	6	5	2	3	5	5	1

*Data compiled from teacher's self-observation forms.

TABLE 23

USE OF AUDIO MEDIA

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	9	14	11	10	12	12	6	8	12	10	9	10	6	6	6	6	6	4
Used on One Day	3	3	5	2	2	0	2	2	2	3	3	2	1	1	0	1	0	1
Used on Two Days	4	0	0	1	1	0	0	1	0	0	0	4	1	1	2	3	2	0
Used on Three Days	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Used on Four Days	1	2	1	0	1	0	1	0	1	2	0	0	4	0	3	0	0	0
Used on Five Days	2	1	2	0	2	3	1	2	1	0	2	1	1	1	0	1	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	19	17	15	18	12	16	13	15	15	15	16	16	14	10	14	14	12	13
Used on One Day	2	2	4	0	1	2	5	2	1	0	1	2	4	3	2	1	2	0
Used on Two Days	1	1	0	2	2	3	0	2	1	2	3	0	0	0	2	2	1	1
Used on Three Days	0	0	0	1	2	0	0	0	3	3	1	1	2	3	2	3	3	1
Used on Four Days	0	1	1	0	1	0	0	0	1	3	0	1	1	1	1	0	0	0
Used on Five Days	0	1	1	0	3	2	2	4	0	0	2	2	2	2	0	2	2	1

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*Data compiled from teacher's self-observation forms.

TABLE 24

USE OF STILL VISUALS

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	12	18	16	11	12	11	8	12	12	12	11	12	7	5	8	8	9	4
Used on One Day	3	1	2	1	2	2	0	0	2	0	1	2	1	3	0	1	0	1
Used on Two Days	2	0	0	2	1	1	1	1	1	0	0	2	1	0	2	1	0	0
Used on Three Days	0	0	0	1	1	0	0	0	1	1	0	0	1	1	0	0	0	0
Used on Four Days	0	1	0	0	0	0	1	0	0	1	1	0	0	0	1	1	1	0
Used on Five Days	2	0	2	0	2	1	0	0	1	1	1	1	0	0	0	0	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	19	15	15	16	14	14	14	17	13	18	18	16	16	14	15	13	13	14
Used on One Day	1	2	4	1	1	2	3	1	1	0	2	4	5	1	3	3	1	0
Used on Two Days	2	1	0	3	3	2	0	0	3	2	1	0	0	1	1	0	2	2
Used on Three Days	0	2	0	1	1	0	1	1	2	2	0	0	0	1	1	3	2	0
Used on Four Days	0	0	0	0	1	1	1	0	1	1	0	0	0	0	1	0	1	0
Used on Five Days	0	2	2	0	1	4	1	4	1	0	2	2	2	2	0	5	1	0

*Data compiled from teacher's self-observation forms.

TABLE 25

USE OF HUMAN RESOURCES

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	19	16	15	12	11	10	7	8	11	12	9	11	6	5	5	8	7	2
Used on One Day	0	2	3	1	4	2	0	2	3	0	3	1	1	1	2	2	1	1
Used on Two Days	0	0	1	1	0	2	1	1	2	2	1	1	2	1	1	0	2	1
Used on Three Days	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Used on Four Days	0	1	0	0	0	0	0	1	0	0	0	0	0	1	3	0	0	0
Used on Five Days	0	0	1	0	3	1	2	1	1	1	1	2	1	1	0	1	0	1

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	18	18	13	15	16	17	15	17	15	17	16	14	14	14	12	14	13	10
Used on One Day	0	0	3	1	2	3	0	2	1	2	0	1	1	1	2	2	1	2
Used on Two Days	0	2	1	2	1	0	2	2	2	1	1	1	2	0	2	0	0	0
Used on Three Days	0	1	1	3	0	0	2	0	1	1	2	2	1	0	2	1	2	1
Used on Four Days	1	1	0	0	2	2	0	0	1	1	1	0	1	2	2	0	0	1
Used on Five Days	3	0	3	0	0	1	1	2	1	0	3	4	4	2	1	3	4	2

*Data compiled from teacher's self-observation forms.

TABLE 26

USE OF MOTION VISUALS

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	12	12	13	10	12	9	8	9	11	10	4	8	6	4	6	6	7	4
Used on One Day	4	2	3	2	2	2	1	2	3	2	3	5	3	2	1	2	2	0
Used on Two Days	0	2	1	2	2	1	0	1	1	0	5	2	0	0	2	1	0	0
Used on Three Days	0	1	1	1	0	0	0	1	0	1	1	0	1	1	1	1	0	1
Used on Four Days	1	1	0	0	1	1	1	0	0	2	0	1	0	0	0	1	1	0
Used on Five Days	1	2	2	0	1	2	0	0	2		1	1	0	2	1	0	0	0

GROUP 2

	WEEK 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	18	14	18	17	14	16	17	14	16	16	18	15	16	14	18	16	14	12
Used on One Day	2	4	0	2	3	1	2	2	0	4	4	2	4	2	1	3	0	2
Used on Two Days	2	3	1	1	3	4	0	2	0	1	0	3	1	1	1	1	5	0
Used on Three Days	0	0	0	1	0	0	0	1	2	2	0	1	1	1	0	0	0	2
Used on Four Days	0	0	1	0	0	1	0	0	1	0	1	1	1	0	1	0	1	0
Used on Five Days	0	1	1	0	1	1	1	4	2	0	0	0	0	1	0	0	0	0

*Data compiled from teacher's self-observation forms.

TABLE 27
USE OF ACTUAL OBJECTS

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	7	11	6	6	7	7	2	5	6	6	6	6	3	3	2	4	3	1
Used on One Day	2	3	4	1	2	1	1	1	2	2	0	2	0	0	0	0	0	0
Used on Two Days	4	1	1	3	0	0	2	0	2	0	1	1	1	1	1	0	1	0
Used on Three Days	0	0	3	5	1	0	0	2	1	0	2	0	0	1	2	1	0	1
Used on Four Days	3	2	1	0	1	1	2	1	1	5	0	0	2	1	2	2	0	0
Used on Five Days	3	3	5	0	7	6	3	4	5	2	5	8	4	3	4	4	6	3

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	14	12	13	15	14	12	13	15	14	16	17	15	15	12	11	11	10	10
Used on One Day	1	2	1	3	1	2	3	2	1	2	0	2	1	1	2	3	3	1
Used on Two Days	1	1	1	0	1	2	0	2	2	3	1	0	1	1	3	0	0	0
Used on Three Days	2	2	1	3	2	0	0	2	0	0	1	0	2	0	1	1	2	2
Used on Four Days	1	5	1	0	1	5	2	0	2	2	1	1	1	4	3	1	2	2
Used on Five Days	3	0	4	0	2	2	2	2	2	0	3	4	3	1	1	4	3	1

*Data compiled from teacher's self-observation forms.

TABLE 28

VARIATION OF INSTRUCTIONAL EVENTS

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	10	9	10	7	12	8	7	6	8	7	5	9	4	4	6	6	4	3
Used on One Day	2	4	1	4	2	4	1	2	2	3	3	1	2	0	0	1	1	0
Used on Two Days	5	5	6	2	1	0	0	3	3	2	1	4	0	2	3	2	2	1
Used on Three Days	1	1	1	2	1	1	0	0	1	0	1	3	2	1	0	0	0	1
Used on Four Days	0	1	0	0	0	0	1	0	1	2	1	0	1	0	2	1	2	0
Used on Five Days	1	0	2	0	2	2	1	2	2	1	3	0	1	2	0	1	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	10	13	14	11	11	14	12	16	13	15	11	11	14	11	8	7	10	9
Used on One Day	3	2	2	3	2	4	1	2	1	2	5	2	0	2	5	4	2	1
Used on Two Days	1	1	1	3	2	2	3	2	2	2	2	4	4	1	2	3	2	0
Used on Three Days	2	2	1	4	3	0	1	2	2	2	2	0	2	0	1	3	4	2
Used on Four Days	3	3	1	0	2	2	1	0	1	2	0	2	1	2	3	1	0	2
Used on Five Days	3	1	2	0	1	1	2	1	2	0	3	3	2	3	2	2	2	2

*Data compiled from teacher's self-observation forms.

NUMBER OF TEACHERS
REPORTING THE
TECHNIQUE WAS:

TABLE 29

USE OF PEER TUTORING
GROUP 1

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	10	11	8	5	8	7	5	5	6	6	2	7	3	3	6	4	3	2
Used on One Day	2	2	3	5	3	2	1	2	2	1	3	3	1	0	0	1	0	2
Used on Two Days	1	4	2	3	0	0	2	2	3	1	2	1	0	2	1	0	2	0
Used on Three Days	2	1	3	2	1	1	0	2	3	2	3	1	2	2	0	2	2	1
Used on Four Days	2	1	2	0	2	1	0	0	1	5	2	3	1	1	3	2	2	0
Used on Five Days	2	1	2	0	4	4	2	2	2	0	2	2	3	1	1	2	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	12	7	11	7	5	8	7	9	10	9	6	4	4	4	5	8	5	6
Used on One Day	3	5	0	4	1	4	2	2	4	3	1	2	2	3	1	2	2	0
Used on Two Days	1	5	5	3	5	0	3	1	2	5	5	4	5	4	4	2	2	2
Used on Three Days	2	2	2	7	1	3	2	4	3	1	1	6	5	3	5	2	7	3
Used on Four Days	3	2	0	0	2	5	0	1	1	4	3	6	1	1	3	3	2	2
Used on Five Days	1	1	3	0	7	3	6	6	1	1	7		6	4	3	3	2	3

*Data compiled from teacher's self-observation forms.

TABLE 30
INSTRUCTOR TUTORING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	5	5	6	3	3	2	2	2	2	3	6	6	1	1	4	4	2	0
Used on One Day	2	1	1	2	3	2	1	1	4	2	1	1	1	1	1	1	1	1
Used on Two Days	3	5	2	1	1	1	0	0	1	1	0	2	0	1	0	1	1	1
Used on Three Days	2	0	0	9	1	1	0	2	2	1	0	0	1	2	0	1	1	1
Used on Four Days	1	4	2	0	0	1	3	1	3	5	2	1	1	1	3	0	2	0
Used on Five Days	6	5	9	0	10	8	4	7	5	3	5	7	6	3	3	4	3	2

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	6	6	6	5	6	5	6	4	6	4	5	5	5	4	3	3	3	2
Used on One Day	1	2	1	4	2	4	2	3	2	2	1	2	1	1	2	2	1	1
Used on Two Days	4	2	3	2	3	1	1	2	3	5	3	3	1	1	1	2	0	0
Used on Three Days	2	3	1	10	1	2	2	2	3	3	2	2	4	3	3	5	5	3
Used on Four Days	5	5	3	0	2	7	2	1	1	8	2	4	4	3	7	8	3	5
Used on Five Days	4	4	7	0	7	4	7	11	6	1	10	6	8	7	5	[illegible]	8	5

*Data compiled from teacher's self-observation forms.

TABLE 31

USE OF ADVANCED STUDENT TUTORING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	17	15	15	13*	12	12	9	9	11	11	9	12	5	5	7	8	7	4
Used on One Day	0	2	4	1	3	1	0	2	5	1	0	1	2	0	0	0	1	0
Used on Two Days	1	3	0	1	3	2	0	1	0	2	2	1	0	2	1	1	1	0
Used on Three Days	0	0	0	0	0	0	1	0	1	1	3	2	2	0	2	1	0	0
Used on Four Days	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0
Used on Five Days	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	1

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	19	15	14	14	16	17	17	17	15	18	21	16	16	15	17	13	13	13
Used on One Day	1	2	1	1	2	3	1	2	1	3	0	3	1	0	2	1	2	0
Used on Two Days	1	1	2	4	1	2	0	1	1	0	1	1	4	1	1	3	2	2
Used on Three Days	1	0	1	2	0	0	0	1	3	1	0	1	1	2	0	2	1	0
Used on Four Days	0	3	0	0	1	0	0	0	0	1	0	0	0	0	1	1	1	0
Used on Five Days	0	1	3	0	1	1	2	2	1	0	1	1	1	1	0	0	1	1

*Data compiled from teacher's self-observation forms.

TABLE 32

USE OF COMMUNITY VOLUNTEER TUTORING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	18	18	18	14	17	14	9	13	16	15	13	16	10	8	10	10	9	5
Used on One Day	1	1	2	1	0	0	0	0	1	0	0	1	0	1	1	0	1	0
Used on Two Days	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Used on Three Days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Used on Four Days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Used on Five Days	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	21	22	21	21	17	22	20	20	20	22	21	21	22	18	18	20	18	13
Used on One Day	1	0	0	0	2	1	0	2	1	1	1	0	1	0	2	0	1	1
Used on Two Days	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	1
Used on Three Days	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Used on Four Days	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Used on Five Days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

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*Data compiled from teacher's self-observation forms.

TABLE 33

INSTRUCTOR PACING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	8	9	11	9	11	9	5	7	7	9	8	9	3	4	6	7	3	3
Used on One Day	6	6	4	3	3	2	1	2	4	1	2	3	1	0	0	0	0	1
Used on Two Days	1	2	1	1	2	0	2	1	1	0	0	2	2	1	1	1	3	0
Used on Three Days	1	0	1	2	0	2	0	1	2	0	1	1	0	0	1	0	0	1
Used on Four Days	2	1	0	0	0	0	1	0	0	3	0	0	2	1	1	2	2	0
Used on Five Days	1	2	3	0	2	2	1	2	3	2	3	2	2	3	2	1	2	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	12	12	12	12	11	14	14	14	12	16	14	12	17	7	12	10	8	8
Used on One Day	2	1	3	4	2	2	1	4	4	2	3	3	1	4	2	3	3	1
Used on Two Days	2	1	1	0	2	1	1	2	1	2	0	3	1	1	2	2	2	0
Used on Three Days	0	4	0	5	3	1	1	1	0	0	3	1	1	1	0	1	2	2
Used on Four Days	3	4	1	0	0	3	1	1	1	3	1	0	2	4	4	2	3	3
Used on Five Days	3	0	4	0	3	2	2	1	3	0	2	3	1	2	1	2	2	2

*Data compiled from teacher's self-observation forms.

TABLE 34

STUDENT PACING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	15	15	15	12	12	12	7	11	11	10	10	13	8	8	9	8	7	5
Used on One Day	2	2	2	1	2	2	2	0	4	1	1	2	1	0	0	1	1	0
Used on Two Days	1	0	0	1	0	0	1	1	0	1	2	1	0	0	0	0	0	0
Used on Three Days	0	2	2	1	2	0	0	1	1	1	0	1	0	0	0	1	0	0
Used on Four Days	1	1	0	0	2	0	0	0	1	2	0	0	1	1	0	1	1	1
Used on Five Days	0	0	1	0	0	1	0	0	0	0	2	0	0	0	2	0	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	15	14	16	15	15	16	16	18	15	17	16	13	14	13	13	11	10	7
Used on One Day	1	1	2	3	1	1	2	2	0	1	0	2	1	0	1	0	1	3
Used on Two Days	2	3	0	2	2	4	0	1	0	0	2	3	1	2	2	0	2	0
Used on Three Days	1	1	1	1	0	0	0	3	3	1	1	2	2	1	0	4	2	3
Used on Four Days	1	2	2	0	1	1	2	0	2	4	0	0	1	1	3	2	0	2
Used on Five Days	2	1	0	0	3	1	0	1	1	0	4	2	4	2	2	3	5	1

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*Data compiled from teacher's self-observation forms.

TABLE 35

INSTRUCTOR-STUDENT PACING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	14	15	14	11	11	12	8	9	12	9	10	12	8	6	8	10	6	4
Used on One Day	2	2	3	2	2	2	0	1	3	4	1	1	0	1	1	0	0	1
Used on Two Days	1	1	1	0	2	0	1	2	0	0	0	1	0	0	0	0	2	0
Used on Three Days	1	0	0	2	1	0	0	0	0	0	2	1	0	0	0	0	0	0
Used on Four Days	0	2	1	0	0	0	0	0	0	2	0	0	2	1	1	0	1	0
Used on Five Days	1	0	1	0	2	1	1	1	2	0	1	2	0	1	1	1	1	0

GROUP 2

	WEEK 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	16	15	12	16	17	16	16	16	15	18	19	17	18	15	13	14	16	13
Used on One Day	1	3	2	2	0	4	1	1	1	2	1	1	0	1	1	1	0	1
Used on Two Days	4	1	4	2	2	1	1	1	2	0	3	2	1	0	2	3	1	0
Used on Three Days	0	1	0	1	2	1	0	3	1	0	0	1	2	0	1	1	1	0
Used on Four Days	1	1	1	0	0	0	0	0	2	3	0	0	0	2	4	0	1	1
Used on Five Days	0	1	2	0	0	1	2	2	0	0	0	1	2	1	0	1	1	1

*Data compiled from teacher's self-observation forms.

TABLE 36
PROCTOR-STUDENT PACING

NUMBER OF TEACHERS
REPORTING THE
TECHNIQUE WAS:

GROUP 1

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	19	18	20	15	18	15	10	12	17	14	14	17	10	8	11	11	10	5
Used on One Day	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Used on Two Days	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
Used on Three Days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Used on Four Days	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Used on Five Days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	19	19	19	19	18	20	19	22	20	21	20	19	21	18	20	18	19	10
Used on One Day	0	1	2	0	1	2	0	0	0	0	1	1	0	1	1	1	0	2
Used on Two Days	1	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	1
Used on Three Days	1	1	0	2	0	0	1	0	1	1	0	2	0	0	0	1	0	3
Used on Four Days	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0
Used on Five Days	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0

*Data compiled from teacher's self-observation forms.

TABLE 37

USE OF CONTINGENCY MANAGEMENT

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	16	18	16	13	14	12	10	11	17	13	13	14	9	7	11	10	9	5
Used on One Day	3	0	2	0	3	2	0	2	0	0	1	2	0	1	0	0	0	0
Used on Two Days	0	0	0	1	0	0	0	0	0	1	0	0	1	1	0	1	1	0
Used on Three Days	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Used on Four Days	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Used on Five Days	0	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	17	15	18	18	13	19	15	15	13	18	17	16	15	14	16	15	17	12
Used on One Day	3	6	2	1	2	1	3	3	3	1	3	4	5	2	3	3	2	3
Used on Two Days	1	0	1	1	4	3	0	5	1	2	1	1	3	0	1	2	1	0
Used on Three Days	1	1	0	1	2	0	3	0	3	1	0	1	0	3	0	0	0	1
Used on Four Days	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	0	0	0
Used on Five Days	0	0	0	0		0	1	0	1	0	0	0	0	0	0	0	0	0

*Data compiled from teacher's self-observation forms.

TABLE 38

SHORT-TERM GOAL SEQUENCING

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	17	18	18	13	16	13	8	10	11	13	10	14	9	7	8	10	8	5
Used on One Day	1	1	0	1	1	1	1	2	4	1	2	1	0	0	1	0	0	0
Used on Two Days	0	0	0	1	0	0	0	0	1	0	1	2	0	0	0	0	0	0
Used on Three Days	0	0	1	0	1	1	0	0	1	0	0	0	1	1	3	0	0	0
Used on Four Days	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0
Used on Five Days	0	1	1	0	0	0	1	1	0	0	1	0	0	1	0	1	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	16	16	17	18	18	19	18	18	17	19	18	15	17	15	18	15	14	12
Used on One Day	4	4	3	1	1	2	1	1	1	3	3	4	2	1	0	1	3	2
Used on Two Days	0	0	1	2	1	0	1	2	1	0	0	0	0	2	1	2	2	0
Used on Three Days	1	1	0	0	0	1	0	1	1	0	1	2	4	1	1	1	1	1
Used on Four Days	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0
Used on Five Days	1	1	0	0	1	1	0	0	1	0	1	0	0	0	0	1	0	0

*Data compiled from teacher's self-observation forms.

TABLE 39

SEQUENCING OF UNIT OBJECTIVES

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	15	16	17	12	17	12	8	9	12	13	10	14	6	5	8	10	8	5
Used on One Day	0	2	0	2	0	0	0	2	2	1	3	1	2	2	0	0	0	0
Used on Two Days	1	0	1	0	0	2	1	0	1	0	0	2	0	0	1	0	0	0
Used on Three Days	0	1	0	1	1	0	1	1	1	1	1	0	1	1	0	0	0	0
Used on Four Days	2	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0
Used on Five Days	1	1	1	0	0	0	0	1	1	0	0	0	1	1	0	1	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	17	20	18	18	17	19	19	21	17	19	21	19	19	18	16	17	14	13
Used on One Day	2	2	3	1	2	2	0	1	2	1	2	1	3	0	3	1	2	0
Used on Two Days	2	0	0	2	1	0	1	1	1	1	0	2	0	0	1	1	2	1
Used on Three Days	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0	1	2	0
Used on Four Days	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1
Used on Five Days	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

*Data compiled from teacher's self-observation forms.

TABLE 40

SEQUENCING OF LESSONS

GROUP 1

NUMBER OF TEACHERS REPORTING THE TECHNIQUE WAS:	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	15	17	13	10	12	10	7	6	8	12	7	10	5	5	6	9	8	5
Used on One Day	3	0	3	2	1	2	1	2	5	1	2	2	1	0	1	1	0	0
Used on Two Days	1	0	1	0	1	1	0	4	0	0	3	4	1	2	1	0	0	0
Used on Three Days	1	1	0	3	1	1	0	0	1	0	1	0	2	1	2	0	0	0
Used on Four Days	1	1	1	0	2	0	2	0	2	2	0	1	0	0	1	0	1	0
Used on Five Days	1	1	2	0	1	1	0	1	1	0	1	0	1	1	0	1	1	0

GROUP 2

	WEEK																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Not Used This Week	12	15	13	17	18	1	15	17	16	17	18	15	17	13	14	16	13	14
Used on One Day	4	2	4	2	1	3	3	3	1	2	2	5	2	1	2	2	2	0
Used on Two Days	3	2	1	2	1	0	0	2	1	2	0	0	0	2	3	1	2	0
Used on Three Days	1	2	1	0	0	1	2	1	1	0	0	0	2	1	1	0	2	0
Used on Four Days	1	1	1	0	1	1	0	0	1	2	2	0	1	1	1	0	0	2
Used on Five Days	1	0	1	0	0	0	0	0	0	0	1	2	1	1	0	1	1	0

*Data compiled from teacher's self-observation forms.

TABLE 41

LONG-TERM GOAL SETTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	3	12	1	5	20	1	8	16
2	6	24	2	4	16	2	10	20
3	6	24	3	3	12	3	9	18
4	3	12	4	3	12	4	6	12
5	3	12	5	4	16	5	7	14
6	1	4	6	1	4	6	2	4
7	1	4	7	1	4	7	2	4
8	0	0	8	1	4	8	1	2
9	2	8	9	2	8	9	4	8
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized long-term goal setting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 42
LONG-TERM GOAL SETTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	3	15	1	2	9	1	5	12
2	4	20	2	3	13	2	7	16
3	4	20	3	3	13	3	7	16
4	1	5	4	2	9	4	3	7
5	4	20	5	4	17	5	8	19
6	2	10	6	3	13	6	5	12
7	1	5	7	3	13	7	4	9
8	0	0	8	2	9	8	2	5
9	1	5	9	1	4	9	2	5
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized long-term goal setting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 43
LONG-TERM GOAL SETTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	8	1	0	0	1	1	3
2	0	0	2	2	10	2	2	6
3	6	46	3	4	20	3	10	30
4	0	0	4	2	10	4	2	6
5	2	15	5	4	20	5	6	18
6	0	0	6	3	15	6	3	9
7	1	8	7	1	5	7	2	6
8	1	8	8	1	5	8	2	6
9	2	15	9	3	15	9	5	15
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized long-term goal setting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 44

SHORT-TERM GOAL SETTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	2	8	1	2	8	1	4	8
2	4	16	2	4	16	2	8	16
3	3	12	3	5	20	3	8	16
4	3	12	4	1	4	4	4	8
5	4	16	5	3	12	5	7	14
6	3	12	6	2	8	6	5	10
7	3	12	7	2	8	7	5	10
8	0	0	8	1	4	8	1	2
9	2	8	9	4	16	9	6	12
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized short-term goal setting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 45

SHORT-TERM GOAL SETTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	0	0	1	0	0
2	2	10	2	3	13	2	5	12
3	3	15	3	4	17	3	7	16
4	1	5	4	1	4	4	2	5
5	6	30	5	3	13	5	9	21
6	3	15	6	4	17	6	5	12
7	3	15	7	3	13	7	4	9
8	1	5	8	2	9	8	3	7
9	1	5	9	3	13	9	4	9
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized short-term goal setting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 46
SHORT-TERM GOAL SETTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	5	0	1	3
1	0	0	1	0	0	1	0	0
2	3	23	2	2	10	2	5	15
3	0	0	3	3	15	3	3	9
4	0	0	4	4	20	4	4	12
5	3	23	5	1	5	5	4	12
6	2	15	6	3	15	6	5	15
7	2	15	7	2	10	7	4	12
8	2	15	8	2	10	8	4	12
9	1	8	9	2	10	9	3	9
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized short-term goal setting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 47

USE OF PERFORMANCE OBJECTIVES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	3	12	1	3	12	1	6	12
2	1	4	2	3	12	2	4	8
3	3	12	3	3	12	3	6	12
4	0	0	4	3	12	4	3	6
5	4	16	5	3	12	5	7	14
6	2	8	6	2	8	6	4	8
7	7	28	7	3	12	7	10	20
8	1	4	8	2	8	8	3	6
9	3	12	9	2	8	9	5	10
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of performance objectives.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 48

USE OF PERFORMANCE OBJECTIVES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	5	1	1	4	1	2	5
2	0	0	2	3	13	2	3	7
3	7	35	3	3	13	3	10	23
4	3	15	4	2	9	4	5	12
5	3	15	5	3	13	5	6	14
6	0	0	6	2	9	6	2	5
7	2	10	7	3	13	7	5	12
8	2	10	8	3	13	8	5	12
9	2	10	9	3	13	9	5	12
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of performance objectives.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 49

USE OF PERFORMANCE OBJECTIVES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	5	0	1	3
1	1	8	1	3	15	1	4	12
2	0	0	2	3	15	2	3	9
3	2	15	3	2	10	3	4	12
4	1	8	4	1	5	4	2	6
5	0	0	5	4	20	5	4	12
6	2	15	6	3	15	6	5	15
7	1	8	7	1	5	7	2	6
8	5	39	8	2	10	8	7	21
9	1	8	9	0	0	9	1	3
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of performance objectives.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 50

USE OF UNIT PRETESTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	12	48	1	6	24	1	18	36
2	1	4	2	2	8	2	3	6
3	1	4	3	5	20	3	6	12
4	3	12	4	5	20	4	8	16
5	0	0	5	4	16	5	4	8
6	2	8	6	0	0	6	2	4
7	0	0	7	1	4	7	1	2
8	3	12	8	0	0	8	3	6
9	2	8	9	1	4	9	3	6
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of unit pretesting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 51

USE OF UNIT PRETESTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	9	45	1	6	26	1	15	35
2	4	20	2	2	9	2	6	14
3	2	10	3	6	26	3	8	19
4	1	5	4	1	4	4	2	5
5	0	0	5	3	13	5	3	7
6	1	5	6	2	9	6	3	7
7	0	0	7	3	13	7	3	7
8	2	10	8	0	0	8	2	5
9	1	5	9	0	0	9	1	2
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of unit pretesting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 52

USE OF UNIT PRETESTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	5	0	1	3
1	3	39	1	6	30	1	11	33
2	1	8	2	3	15	2	4	12
3	1	8	3	1	5	3	2	6
4	2	15	4	1	5	4	3	9
5	2	15	5	4	20	5	6	18
6	0	0	6	0	0	6	0	0
7	1	8	7	3	15	7	4	12
8	0	0	8	1	5	8	1	3
9	1	8	9	0	0	9	1	3
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of unit pretesting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 53

USE OF LESSON PRETESTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	7	28	1	7	28	1	14	28
2	2	8	2	0	0	2	2	4
3	4	16	3	3	12	3	7	14
4	2	8	4	4	16	4	6	12
5	4	16	5	5	20	5	9	18
6	1	4	6	1	4	6	2	4
7	1	4	7	2	8	7	3	6
8	2	8	8	0	0	8	2	4
9	1	4	9	2	8	9	3	6
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of lesson pretesting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 54

USE OF LESSON PRETESTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	5	0	1	4	0	2	5
1	7	35	1	5	22	1	12	28
2	3	15	2	3	13	2	6	14
3	4	20	3	6	26	3	10	23
4	1	5	4	3	13	4	4	9
5	1	5	5	2	9	5	3	7
6	0	0	6	0	0	6	0	0
7	0	0	7	1	4	7	1	2
8	0	0	8	2	9	8	2	5
9	3	15	9	0	0	9	3	7
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of lesson pretesting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 55

USE OF LESSON PRETESTING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	4	31	1	3	15	1	7	21
2	1	8	2	3	15	2	4	12
3	2	15	3	1	5	3	3	9
4	2	15	4	3	15	4	5	15
5	2	15	5	5	25	5	7	21
6	0	0	6	2	10	6	2	6
7	1	8	7	2	10	7	3	9
8	1	8	8	1	5	8	2	6
9	0	0	9	0	0	9	0	0
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of lesson pretesting.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 56

PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST MASTERY*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	3	12	1	5	20	1	8	16
2	1	4	2	1	4	2	2	4
3	0	0	3	1	4	3	1	2
4	3	12	4	1	4	4	4	8
5	1	4	5	3	12	5	4	8
6	4	16	6	3	12	6	7	14
7	4	16	7	4	16	7	8	16
8	1	4	8	1	4	8	2	4
9	7	28	9	5	20	9	12	24
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized prescription of instruction following posttest mastery.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 57

PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST MASTERY*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	4	20	1	2	9	1	6	14
2	0	0	2	1	4	2	1	2
3	0	0	3	4	17	3	4	9
4	1	5	4	0	0	4	1	2
5	0	0	5	3	13	5	3	7
6	3	15	6	1	4	6	4	9
7	4	20	7	5	22	7	9	21
8	0	0	8	2	9	8	2	5
9	8	40	9	5	22	9	13	30
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized prescription of instruction following posttest mastery.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 58

PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST MASTERY*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	15	1	1	5	1	3	9
2	0	0	2	2	10	2	2	6
3	0	0	3	1	5	3	1	3
4	1	8	4	1	5	4	2	6
5	2	15	5	0	0	5	2	6
6	1	8	6	2	10	6	3	9
7	0	0	7	5	25	7	5	15
8	0	0	8	4	20	8	4	12
9	7	54	9	4	20	9	11	33
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized prescription of instruction following posttest mastery.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 59

PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST NONMASTERY*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	5	20	1	5	20	1	10	20
2	0	0	2	4	16	2	4	8
3	4	16	3	1	4	3	5	10
4	2	8	4	0	0	4	2	4
5	0	0	5	2	8	5	2	4
6	3	12	6	3	12	6	6	12
7	3	12	7	4	16	7	7	14
8	0	0	8	0	0	8	0	0
9	8	32	9	5	20	9	13	26
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized prescription of instruction following posttest nonmastery.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 60

PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST NONMASTERY*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	5	0	0	0	0	1	2
1	4	20	1	3	13	1	7	16
2	1	5	2	1	4	2	2	5
3	1	5	3	5	22	3	6	14
4	2	10	4	1	4	4	3	7
5	1	5	5	3	13	5	4	9
6	0	0	6	0	0	6	0	0
7	2	10	7	4	17	7	6	14
8	2	10	8	4	17	8	6	14
9	6	30	9	2	9	9	8	19
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized prescription of instruction following posttest nonmastery.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 61
PRESCRIPTION OF INSTRUCTION FOLLOWING POSTTEST NONMASTERY*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	15	1	2	10	1	4	12
2	1	8	2	2	10	2	3	9
3	2	15	3	1	5	3	3	9
4	1	8	4	1	5	4	2	6
5	2	15	5	1	5	5	3	9
6	1	8	6	3	15	6	4	12
7	0	0	7	4	20	7	4	12
8	0	0	8	4	20	8	4	12
9	4	31	9	2	10	9	6	18
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized prescription of instruction following posttest nonmastery.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 62
USE OF PRINT MEDIA*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	0	0	1	1	4	1	1	2
2	0	0	2	2	8	2	2	4
3	3	12	3	1	4	3	4	8
4	2	8	4	2	8	4	4	8
5	4	16	5	4	16	5	8	16
6	3	12	6	3	12	6	6	12
7	3	12	7	2	8	7	5	10
8	3	12	8	2	8	8	5	10
9	6	24	9	7	28	9	13	26
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of print media.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 63
USE OF PRINT MEDIA*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	0	0	1	0	0
2	0	0	2	4	17	2	4	9
3	0	0	3	1	4	3	1	2
4	1	5	4	2	9	4	3	7
5	3	15	5	2	9	5	5	12
6	2	10	6	4	17	6	6	14
7	2	10	7	0	0	7	2	5
8	4	20	8	5	22	8	9	21
9	8	40	9	5	22	9	13	30
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of print media.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 64

USE OF PRINT MEDIA*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	0	0	1	0	0
2	0	0	2	1	5	2	1	3
3	2	15	3	0	0	3	2	6
4	2	15	4	2	10	4	4	12
5	2	15	5	3	15	5	5	15
6	1	8	6	0	0	6	1	3
7	0	0	7	4	20	7	4	12
8	0	0	8	3	15	8	3	9
9	6	46	9	7	35	9	13	39
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of print media.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 65
USE OF AUDIO MEDIA*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	2	8	1	4	16	1	6	12
2	2	8	2	1	4	2	3	6
3	3	12	3	4	16	3	7	14
4	0	0	4	3	12	4	3	6
5	7	28	5	3	12	5	10	20
6	2	8	6	1	4	6	3	6
7	2	8	7	4	16	7	6	12
8	3	12	8	1	4	8	4	8
9	3	13	9	3	12	9	6	12
Total		100	Total		100	Total		100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of audio media.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 66

USE OF AUDIO MEDIA*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	5	1	2	9	1	3	7
2	1	5	2	4	17	2	5	12
3	2	10	3	3	13	3	5	12
4	3	15	4	2	9	4	5	12
5	2	10	5	3	13	5	5	12
6	3	15	6	0	0	6	3	7
7	3	15	7	3	13	7	6	14
8	1	5	8	3	13	8	4	9
9	4	20	9	3	13	9	7	16
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of audio media.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 67

USE OF AUDIO MEDIA*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	8	0	0	0	0	1	3
1	1	8	1	0	0	1	1	3
2	0	0	2	2	10	2	2	6
3	3	23	3	2	10	3	5	15
4	2	15	4	2	10	4	4	12
5	1	8	5	3	15	5	4	12
6	0	0	6	1	5	6	1	3
7	2	15	7	2	10	7	4	12
8	3	23	8	0	0	8	6	18
9	0	0	9	5	25	9	5	15
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of audio media.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 68

USE OF STILL VISUALS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	2	8	0	1	4	0	3	6
1	3	12	1	3	12	1	6	12
2	4	16	2	2	8	2	6	12
3	5	20	3	3	12	3	8	16
4	0	0	4	3	12	4	3	6
5	6	24	5	5	20	5	11	22
6	1	4	6	1	4	6	2	4
7	0	0	7	4	16	7	4	8
8	3	12	8	0	0	8	3	6
9	1	4	9	3	12	9	4	8
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of still visuals.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 69
USE OF STILL VISUALS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	4	20	1	4	17	1	8	19
2	2	10	2	4	17	2	6	14
3	3	15	3	3	13	3	6	14
4	2	10	4	2	9	4	4	9
5	2	10	5	3	13	5	5	12
6	2	10	6	0	0	6	2	5
7	1	5	7	1	4	7	2	5
8	0	0	8	1	4	8	1	2
9	4	20	9	5	22	9	9	21
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of still media.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 70
USE OF STILL VISUALS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	8	0	0	0	0	1	3
1	1	8	1	2	10	1	3	9
2	1	8	2	2	10	2	3	9
3	3	23	3	3	15	3	6	18
4	1	8	4	1	5	4	2	6
5	2	15	5	3	15	5	5	15
6	0	0	6	0	0	6	0	0
7	2	15	7	2	10	7	4	12
8	1	8	8	4	20	8	5	15
9	1	8	9	3	15	9	4	12
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of still visuals.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 71

USE OF HUMAN RESOURCES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	5	20	1	5	20	1	10	20
2	3	12	2	4	16	2	7	14
3	7	28	3	2	8	3	9	18
4	2	8	4	0	0	4	2	4
5	1	4	5	4	16	5	5	10
6	3	12	6	0	0	6	3	6
7	0	0	7	4	16	7	4	8
8	2	8	8	0	0	8	2	4
9	1	4	9	5	20	9	6	12
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of human resources.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 72

USE OF HUMAN RESOURCES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	5	1	2	9	1	3	7
2	7	35	2	6	26	2	13	30
3	2	10	3	3	13	3	5	12
4	1	5	4	2	9	4	3	7
5	2	10	5	1	4	5	3	7
6	1	5	6	2	9	6	3	7
7	2	10	7	1	4	7	3	7
8	3	15	8	3	13	8	6	14
9	1	5	9	3	13	9	4	9
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of human resources.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 73

USE OF HUMAN RESOURCES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	8	1	3	15	1	4	12
2	3	23	2	2	10	2	5	15
3	1	8	3	1	5	3	2	6
4	2	15	4	0	0	4	2	6
5	1	8	5	3	15	5	4	12
6	3	23	6	3	15	6	6	18
7	1	8	7	2	10	7	3	0
8	1	8	8	2	10	8	3	9
9	0	0	9	4	20	9	4	12
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of human resources.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 74
USE OF MOTION VISUALS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	3	12	0	1	4	0	4	8
1	3	12	1	6	24	1	9	18
2	4	16	2	3	12	2	7	14
3	5	20	3	3	12	3	8	16
4	2	8	4	2	8	4	4	8
5	4	16	5	3	12	5	7	14
6	1	4	6	0	0	6	1	2
7	0	0	7	4	16	7	4	8
8	3	12	8	0	0	8	3	6
9	0	0	9	3	12	9	3	6
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of motion visuals.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 75
USE OF MOTION VISUALS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	10	1	5	22	1	7	16
2	5	25	2	5	22	2	10	23
3	2	10	3	3	13	3	5	12
4	4	20	4	2	9	4	6	14
5	3	15	5	1	4	5	4	9
6	1	5	6	2	9	6	3	7
7	3	15	7	1	4	7	4	9
8	0	0	8	2	9	8	2	5
9	0	0	9	2	9	9	2	5
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of motion visuals.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 76

USE OF MOTION VISUALS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	8	1	5	25	1	6	18
2	2	15	2	2	10	2	4	12
3	4	30	3	1	5	3	5	15
4	1	8	4	1	5	4	2	6
5	2	15	5	4	20	5	6	18
6	1	8	6	1	5	6	2	6
7	2	15	7	1	5	7	3	9
8	0	0	8	1	5	8	1	3
9	0	0	9	4	20	9	4	12
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of motion visuals.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 77

USE OF ACTUAL OBJECTS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	1	4	1	5	20	1	6	12
2	1	4	2	2	8	2	3	6
3	0	0	3	2	8	3	2	4
4	0	0	4	2	8	4	2	4
5	2	8	5	1	4	5	3	6
6	3	12	6	0	0	6	3	6
7	2	8	7	3	12	7	5	10
8	4	16	8	0	0	8	4	8
9	11	44	9	9	36	9	20	40
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of actual objects.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 78

USE OF ACTUAL OBJECTS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	1	4	1	1	2
2	1	5	2	5	22	2	6	14
3	0	0	3	0	0	3	0	0
4	1	5	4	2	9	4	3	7
5	5	25	5	2	9	5	7	16
6	0	0	6	3	13	6	3	7
7	3	15	7	1	4	7	4	9
8	1	5	8	0	0	8	1	2
9	9	45	9	9	39	9	18	42
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of actual objects.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 79
USE OF ACTUAL OBJECTS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	1	5	1	1	3
2	0	0	2	2	10	2	2	6
3	0	0	3	0	0	3	0	0
4	0	0	4	2	10	4	2	6
5	0	0	5	1	5	5	1	3
6	0	0	6	1	5	6	1	3
7	3	23	7	2	10	7	5	15
8	2	15	8	3	15	8	5	15
9	8	62	9	8	40	9	16	49
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of actual objects.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 80
VARIATION OF INSTRUCTIONAL EVENTS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	2	8	0	1	4	0	3	6
1	1	4	1	2	8	1	3	6
2	3	12	2	1	4	2	4	8
3	2	8	3	0	0	3	2	4
4	1	4	4	2	8	4	3	6
5	2	8	5	3	12	5	5	10
6	3	12	6	3	12	6	6	12
7	3	12	7	5	20	7	8	16
8	1	4	8	0	0	8	1	2
9	7	28	9	8	32	9	15	30
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized variation of instructional events.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 81

VARIATION OF INSTRUCTIONAL EVENTS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	2	10	0	3	13	0	5	12
1	0	0	1	0	0	1	0	0
2	0	0	2	2	9	2	2	5
3	1	5	3	2	9	3	3	7
4	1	5	4	2	9	4	3	7
5	6	30	5	3	13	5	9	21
6	2	10	6	2	9	6	4	9
7	2	10	7	3	13	7	5	12
8	3	15	8	2	9	8	5	12
9	3	15	9	4	17	9	7	16
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized variation of instructional events.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 82

VARIATION OF INSTRUCTIONAL EVENTS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	8	0	1	5	0	2	6
1	1	8	1	0	0	1	1	3
2	0	0	2	1	5	2	1	3
3	0	0	3	3	15	3	3	9
4	1	8	4	0	0	4	1	3
5	1	8	5	2	10	5	3	9
6	1	8	6	2	10	6	3	9
7	4	31	7	3	15	7	7	21
8	1	8	8	3	15	8	4	12
9	3	23	9	5	25	9	8	24
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized variation of instructional events.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 83
USE OF PEER TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	2	8	1	0	0	1	2	4
2	1	4	2	2	8	2	3	5
3	6	24	3	2	8	3	8	16
4	1	4	4	2	8	4	3	6
5	2	8	5	2	8	5	4	8
6	3	12	6	2	8	6	5	10
7	5	20	7	8	32	7	13	26
8	2	8	8	1	4	8	3	6
9	3	12	9	5	20	9	8	16
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of peer tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 84

USE OF PEER TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	5	1	1	4	1	2	5
2	1	5	2	0	0	2	1	2
3	2	10	3	1	4	3	3	7
4	2	10	4	2	9	4	4	9
5	1	5	5	2	9	5	3	7
6	4	20	6	1	4	6	5	12
7	3	15	7	4	17	7	7	16
8	1	5	8	4	17	8	5	12
9	5	25	9	8	35	9	13	30
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of peer tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 85
USE OF PEER TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	8	1	0	0	1	1	3
2	1	8	2	1	5	2	2	6
3	1	8	3	1	5	3	2	6
4	0	0	4	2	10	4	2	6
5	2	15	5	1	5	5	3	9
6	2	15	6	3	15	6	5	15
7	2	15	7	0	0	7	2	6
8	2	15	8	4	20	8	6	18
9	2	15	9	8	40	9	10	30
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of peer tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 86

INSTRUCTOR TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	0	0	1	0	0	1	0	0
2	0	0	2	0	0	2	0	0
3	0	0	3	2	8	3	2	4
4	0	0	4	1	4	4	1	2
5	1	4	5	1	4	5	2	4
6	3	12	6	1	4	6	4	8
7	2	8	7	3	12	7	5	10
8	4	16	8	2	8	8	6	12
9	15	60	9	14	56	9	29	58
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized instructor tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 87

INSTRUCTOR TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	1	4	1	1	2
2	0	0	2	0	0	2	0	0
3	0	0	3	0	0	3	0	0
4	0	0	4	1	4	4	1	2
5	1	5	5	1	4	5	2	5
6	1	5	6	0	0	6	1	2
7	4	20	7	3	13	7	7	16
8	3	15	8	5	22	8	8	19
9	11	55	9	12	52	9	23	54
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized instructor tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 88
INSTRUCTOR TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	0	0	1	0	0
2	1	8	2	0	0	2	1	3
3	0	0	3	0	0	3	0	0
4	0	0	4	0	0	4	0	0
5	0	0	5	1	5	5	1	3
6	2	15	6	1	5	6	3	9
7	1	8	7	3	15	7	4	12
8	1	8	8	4	20	8	5	15
9	8	62	9	11	55	9	19	58
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized instructor tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 89

USE OF ADVANCED STUDENT TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	4	16	1	5	20	1	9	18
2	2	8	2	4	16	2	6	12
3	4	16	3	1	4	3	5	10
4	3	12	4	3	12	4	6	12
5	0	0	5	2	8	5	2	4
6	5	20	6	2	8	6	7	14
7	5	20	7	4	16	7	9	18
8	1	4	8	0	0	8	1	2
9	1	4	9	3	12	9	4	8
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of advanced student tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 90
USE OF ADVANCED STUDENT TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	5	1	6	26	1	7	16
2	2	10	2	3	13	2	5	12
3	2	10	3	3	13	3	5	12
4	2	10	4	1	4	4	3	7
5	5	25	5	0	0	5	5	12
6	2	10	6	2	9	6	4	9
7	1	5	7	5	22	7	6	14
8	2	10	8	1	4	8	3	7
9	3	15	9	2	9	9	5	12
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of advanced student tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 91

USE OF ADVANCED STUDENT TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	0	0	1	3	15	1	3	9
2	2	15	2	2	10	2	4	12
3	1	8	3	2	10	3	3	9
4	1	8	4	1	5	4	2	6
5	2	15	5	4	20	5	6	18
6	2	15	6	1	5	6	3	9
7	3	23	7	3	15	7	6	18
8	0	0	8	2	10	8	2	6
9	2	15	9	2	10	9	4	12
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of advanced student tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 92
USE OF COMMUNITY VOLUNTEER TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	16	64	1	17	68	1	33	66
2	4	16	2	3	12	2	7	14
3	0	0	3	1	4	3	1	2
4	2	8	4	0	0	4	2	4
5	2	8	5	0	0	5	2	4
6	0	0	6	1	4	6	1	2
7	1	4	7	1	4	7	2	4
8	0	0	8	0	0	8	0	0
9	0	0	9	1	4	9	1	2
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of community volunteer tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 93

USE OF COMMUNITY VOLUNTEER TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	12	60	1	13	57	1	25	58
2	3	15	2	1	4	2	4	9
3	1	5	3	4	17	3	5	12
4	0	0	4	2	9	4	2	5
5	4	20	5	1	4	5	5	12
6	0	0	6	1	4	6	1	2
7	0	0	7	1	4	7	1	2
8	0	0	8	0	0	8	0	0
9	0	0	9	0	0	9	0	0
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of community volunteer tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 94
USE OF COMMUNITY VOLUNTEER TUTORING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	6	46	1	13	65	1	19	58
2	5	39	2	0	0	2	5	15
3	1	8	3	3	15	3	4	12
4	0	0	4	1	5	4	1	3
5	1	8	5	3	15	5	4	12
6	0	0	6	0	0	6	0	0
7	0	0	7	0	0	7	0	0
8	0	0	8	0	0	8	0	0
9	0	0	9	0	0	9	0	0
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of community volunteer tutoring.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 95
INSTRUCTOR PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	2	8	1	1	4	1	3	6
2	2	8	2	0	0	2	2	4
3	1	4	3	2	8	3	3	6
4	1	4	4	0	0	4	1	2
5	7	28	5	6	24	5	13	26
6	1	4	6	2	8	6	3	6
7	4	16	7	5	20	7	9	18
8	1	4	8	4	16	8	5	10
9	6	24	9	4	16	9	10	20
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized instructor pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 96
INSTRUCTOR PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	5	1	0	0	1	1	2
2	2	10	2	2	9	2	4	9
3	2	10	3	5	22	3	7	16
4	1	5	4	1	4	4	2	5
5	2	10	5	5	22	5	7	16
6	1	5	6	2	9	6	3	7
7	4	20	7	2	9	7	6	14
8	0	0	8	3	13	8	3	7
9	7	35	9	3	13	9	10	23
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized instructor pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 97

INSTRUCTOR PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	15	1	1	5	1	3	9
2	1	8	2	1	5	2	2	6
3	1	8	3	3	15	3	4	12
4	0	0	4	0	0	4	0	0
5	1	8	5	4	20	5	5	15
6	1	8	6	2	10	6	3	9
7	1	8	7	2	10	7	3	9
8	1	8	8	3	15	8	4	12
9	5	39	9	4	20	9	9	27
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized instructor pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 98

STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	5	20	1	2	8	1	7	14
2	3	12	2	1	4	2	4	8
3	3	12	3	3	12	3	6	12
4	1	4	4	1	4	4	2	4
5	4	16	5	5	20	5	9	18
6	2	8	6	3	12	6	5	10
7	2	8	7	3	12	7	5	10
8	2	8	8	4	16	8	6	12
9	2	8	9	2	8	9	4	8
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 99

STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	3	15	1	2	9	1	5	12
2	5	25	2	2	9	2	7	16
3	3	15	3	5	22	3	8	19
4	2	10	4	3	13	4	5	12
5	4	20	5	6	26	5	10	23
6	1	5	6	1	4	6	2	5
7	1	5	7	1	4	7	2	5
8	0	0	8	0	0	8	0	0
9	1	5	9	3	13	9	4	9
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 100
STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	8	0	1	5	0	2	6
1	2	15	1	2	10	1	4	12
2	3	23	2	2	10	2	5	15
3	3	23	3	0	0	3	3	9
4	0	0	4	0	0	4	0	0
5	1	8	5	6	30	5	7	21
6	0	0	6	2	10	6	2	6
7	2	15	7	5	25	7	7	21
8	1	8	8	1	5	8	2	6
9	0	0	9	1	5	9	1	3
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 101
INSTRUCTOR-STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	2	8	1	1	4	1	3	6
2	3	12	2	1	4	2	4	8
3	2	8	3	3	12	3	5	10
4	2	8	4	3	12	4	5	10
5	3	12	5	5	20	5	8	16
6	3	12	6	5	20	6	8	16
7	4	16	7	2	8	7	6	12
8	3	12	8	3	12	8	6	12
9	3	12	9	1	4	9	4	8
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized instructor-student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 102
INSTRUCTOR-STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	3	15	1	1	4	1	4	9
2	0	0	2	1	4	2	1	2
3	2	10	3	5	22	3	7	16
4	3	15	4	0	0	4	3	7
5	3	15	5	5	22	5	8	19
6	3	15	6	3	13	6	6	14
7	2	10	7	4	17	7	6	14
8	0	0	8	2	9	8	2	5
9	4	20	9	2	9	9	6	14
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized instructor-student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 103
INSTRUCTOR-STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	15	1	0	0	1	2	6
2	1	8	2	2	10	2	3	9
3	1	8	3	1	5	3	2	6
4	0	0	4	1	5	4	1	3
5	2	15	5	2	10	5	4	12
6	1	8	6	5	25	6	6	18
7	2	15	7	3	15	7	5	15
8	0	0	8	4	20	8	4	12
9	4	30	9	2	10	9	6	18
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized instructor-student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 104

PROCTOR-STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	3	12	0	1	4	0	4	8
1	14	56	1	13	52	1	27	54
2	4	16	2	4	16	2	8	16
3	0	0	3	1	4	3	1	2
4	0	0	4	2	8	4	2	4
5	2	8	5	1	4	5	3	6
6	0	0	6	2	8	6	2	4
7	0	0	7	1	4	7	1	2
8	1	4	8	0	0	8	1	2
9	1	4	9	1	4	9	1	2
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized proctor-student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 105

PROCTOR-STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	5	0	0	0	0	1	2
1	14	70	1	11	48	1	25	58
2	2	10	2	2	9	2	4	9
3	2	10	3	3	13	3	5	12
4	1	5	4	1	4	4	2	5
5	0	0	5	3	13	5	3	7
6	0	0	6	1	4	6	1	2
7	0	0	7	1	4	7	1	2
8	0	0	8	1	4	8	1	2
9	0	0	9	0	0	9	0	0
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized proctor-student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 106
PROCTOR-STUDENT PACING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	8	0	0	0	0	1	3
1	7	54	1	9	45	1	16	49
2	2	15	2	1	5	2	3	9
3	1	8	3	1	5	3	2	6
4	1	8	4	2	10	4	3	9
5	0	0	5	2	10	5	2	6
6	0	0	6	3	15	6	3	9
7	1	8	7	1	5	7	2	6
8	0	0	8	1	5	8	1	3
9	0	0	9	0	0	9	0	0
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized proctor-student pacing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 107

USE OF CONTINGENCY MANAGEMENT*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	7	28	1	5	20	1	12	24
2	3	12	2	3	12	2	6	12
3	2	8	3	2	8	3	4	8
4	4	16	4	4	16	4	8	16
5	2	8	5	5	20	5	7	14
6	1	4	6	2	8	6	3	6
7	3	12	7	1	4	7	4	8
8	1	4	8	0	0	8	1	2
9	1	4	9	2	8	9	3	6
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized use of contingency management.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 108
USE OF CONTINGENCY MANAGEMENT*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	9	45	1	3	13	1	12	28
2	2	10	2	6	26	2	8	19
3	3	15	3	5	22	3	8	19
4	0	0	4	1	4	4	1	2
5	1	5	5	3	13	5	4	9
6	3	15	6	2	9	6	5	12
7	1	5	7	2	9	7	3	7
8	0	0	8	0	0	8	0	0
9	1	5	9	1	4	9	2	5
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized use of contingency management.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 109

USE OF CONTINGENCY MANAGEMENT*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	6	46	1	3	15	1	9	27
2	2	15	2	6	30	2	8	24
3	1	8	3	1	5	3	2	6
4	1	8	4	2	10	4	3	9
5	2	15	5	0	0	5	2	6
6	0	0	6	3	15	6	3	9
7	1	8	7	1	5	7	2	6
8	0	0	8	2	10	8	2	6
9	0	0	9	2	10	9	2	6
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized use of contingency management.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 110
SHORT-TERM GOAL SEQUENCING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	5	20	1	4	16	1	9	18
2	2	8	2	3	12	2	5	10
3	3	12	3	4	16	3	7	14
4	3	12	4	1	4	4	4	8
5	3	12	5	4	16	5	7	14
6	2	8	6	4	16	6	6	12
7	4	16	7	1	4	7	5	10
8	0	0	8	2	8	8	2	4
9	2	8	9	1	4	9	3	6
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized short-term goal sequencing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 111
SHORT-TERM GOAL SEQUENCING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	1	5	1	1	4	1	2	5
2	4	20	2	3	13	2	7	16
3	4	20	3	5	22	3	9	21
4	3	15	4	1	4	4	4	9
5	4	20	5	4	17	5	8	19
6	0	0	6	3	13	6	3	7
7	2	10	7	5	22	7	7	16
8	0	0	8	1	4	8	1	2
9	2	10	9	0	0	9	2	5
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized short-term goal sequencing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 112
SHORT-TERM GOAL SEQUENCING*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	15	1	0	0	1	2	6
2	2	15	2	4	20	2	6	18
3	0	0	3	3	15	3	3	9
4	1	8	4	2	10	4	3	9
5	0	0	5	5	25	5	5	15
6	5	39	6	3	15	6	8	24
7	1	8	7	1	5	7	2	6
8	1	8	8	2	10	8	3	9
9	1	8	9	0	0	9	1	3
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized short-term goal sequencing.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 113
SEQUENCING OF UNIT OBJECTIVES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	1	4	0	1	4	0	2	4
1	5	20	1	4	16	1	9	18
2	2	8	2	3	12	2	5	10
3	3	12	3	4	16	3	7	14
4	3	12	4	1	4	4	4	8
5	3	12	5	4	16	5	7	14
6	2	8	6	4	16	6	6	12
7	4	16	7	1	4	7	5	10
8	0	0	8	2	8	8	2	4
9	2	8	9	1	4	9	3	6
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized sequencing of unit objectives.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 114
SEQUENCING OF UNIT OBJECTIVES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	1	5	1	1	4	1	2	5
2	2	10	2	1	4	2	3	7
3	6	30	3	5	22	3	11	26
4	3	15	4	5	22	4	8	19
5	3	15	5	3	13	5	6	14
6	0	0	6	4	17	6	4	9
7	2	10	7	2	9	7	4	9
8	2	10	8	1	4	8	3	7
9	1	5	9	0	0	9	1	2
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized sequencing of unit objectives.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 115

SEQUENCING OF UNIT OBJECTIVES*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	15	1	1	5	1	3	9
2	1	8	2	3	15	2	4	12
3	0	0	3	2	10	3	2	6
4	2	15	4	2	10	4	4	12
5	0	0	5	2	10	5	2	6
6	4	30	6	4	20	6	8	24
7	0	0	7	3	15	7	3	9
8	3	23	8	2	10	8	5	15
9	1	8	9	1	5	9	2	6
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized sequencing of unit objectives.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 116
SEQUENCING OF LESSONS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	1	4	0	1	2
1	4	16	1	1	4	1	5	10
2	3	12	2	4	16	2	7	14
3	3	12	3	2	8	3	5	10
4	2	8	4	0	0	4	2	4
5	6	24	5	7	28	5	13	26
6	3	12	6	2	8	6	5	10
7	1	4	7	3	12	7	4	8
8	0	0	8	1	4	8	1	2
9	3	12	9	4	16	9	7	14
Total	25	100	Total	25	100	Total	50	100

*Responses to Individualization of Instruction Questionnaire (1). Teacher's estimate of the frequency of individualized sequencing of lessons.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 117
SEQUENCING OF LESSONS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	2	10	0	1	4	0	3	7
1	2	10	1	0	0	1	2	5
2	3	15	2	2	9	2	5	12
3	2	10	3	3	13	3	5	12
4	3	15	4	3	13	4	6	14
5	1	5	5	9	39	5	10	23
6	1	5	6	2	9	6	3	7
7	3	15	7	2	9	7	5	12
8	2	10	8	1	4	8	3	7
9	1	5	9	0	0	9	1	2
Total	20	100	Total	23	100	Total	43	100

*Responses to Individualization of Instruction Questionnaire (2). Teacher's estimate of the frequency of individualized sequencing of lessons.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 118
SEQUENCING OF LESSONS*

GROUP 1			GROUP 2			GROUPS 1 & 2 COMBINED		
Response	Frequency	Percent	Response	Frequency	Percent	Response	Frequency	Percent
0	0	0	0	0	0	0	0	0
1	2	15	1	1	5	1	3	9
2	1	8	2	2	10	2	3	9
3	0	0	3	1	5	3	1	3
4	3	23	4	2	10	4	5	15
5	0	0	5	3	15	5	3	9
6	3	23	6	5	25	6	8	24
7	1	8	7	4	20	7	5	15
8	2	15	8	1	5	8	3	9
9	1	8	9	1	5	9	2	6
Total	13	100	Total	20	100	Total	33	100

*Responses to Individualization of Instruction Questionnaire (3). Teacher's estimate of the frequency of individualized sequencing of lessons.

NOTE: Numbers in columns labelled Response stand for increasing use of the technique. "0" indicates no response, "1" indicates never used, "5" indicates moderate use, and "9" indicates very frequent use.

TABLE 119

Forces For and Against Individualized Goal Setting

Forces For	Forces Against
Student Characteristics	
1. teachers can establish prerequisites based on students' interests and abilities	1. prequisites are ignored in assigning students to vocational courses
2. varied interests of students make individual instruction appropriate	2. time and space does not permit the planning and executing of goals as they should be
3. all vocational subjects are elective	3. student has in mind an unreachable goal
4. student self interest	4. student's mental, physical, and emotional handicaps may keep from setting realistic goals
5. adult students attend school because they want to, not because they have to	5. government subsidized programs may encourage a student to take an interest in a vocational program for purposes of collecting a pay check
6. many students are able to take advantage of coopertive programs and see a need for advanced training to stay in their already chosen vocational area	6. low reading level may keep a student from meeting entrance requirements
7. exposure to local industry through visitation	7. mandatory attendance for secondary students cause them to enroll in a vocational program about which they have no interest
	8. immaturity in making decisions
	9. changing values
Teacher Skills/Expertise	
1. teachers have adequate skills in developing realistic and appropriate goals based on a matching of his abilities and interest	1. planning time is insufficient and inadequate to carry out proper counseling and assistance
2. occupational specialists, occupational dictionaires and market surveys are available for students in most areas	2. academic teachers frequently do not recognize the problems and needs of vocational programs
3. academic/vocational subject matter expertise	3. a teacher who refuses to give up traditional methods of teaching, i.e., refusal to individualize instruction may hinder a student in realizing an individual goal
4. through advisory committee work teachers have knowledge of local community needs	5. prejudices on the part of the teacher may influence students away from certain jobs within a vocation
5. vocational teachers generally have high enthusiasm and expertise in their field	6. insufficient time to counsel and interview students, prepare materials, keep records, etc.
6. ability to communicate with the student	7. lack of counseling
7. teacher's knowledge of job market	8. lack of communication with job market
8. ability to recognize student needs, abilities, and interests	

TABLE 119- continued

Forces For and Against Individualized Goal Setting

Forces For	Forces Against
Materials	
1. resource materials are available in all areas	1. proper diagnostic testing facilities for job skills, dexterity, and interests are not available at the needed times
2. free materials are ample in vocational areas	2. laboratory time for most vocational students, especially for individualized learning is inadequate
3. learning resource centers are excellent in some areas	3. materials may be outdated
4. advisory committees can supply excellent up-to-date materials	4. materials may not be available in some vocational areas
5. best materials are free and teacher-made	5. guidance personnel are often academically oriented rather than vocational
6. availability of current job opportunities and labor statistics	6. occupational specialista are not always effective
	7. funding for materials is not always available
	8. inavailability of current job opportunities and labor statistics
	9. lack of current materials and equipment
Organizational/Institutional Characteristics	
1. some schools have active advisory committees	1. teachers have no control over students accepted into class
2. some teachers have adequate facilities to aid in interviewing students and holding individual conferences	2. teacher sometimes has very little control over dismissal of students
3. team-teaching allows one teacher time for planning	3. often students are assigned to a class by an outside agency such as CETA or Federal Migrant Program
4. some schools have administrative support	4. student may be hindered in reaching a goal by a previously set up time frame, i.e., "9 weeks"
5. students see immediate utilization and use of their training and talents.	5. no administrative support
6. students see importance of training within the vocational fields not only from a learning but from a monetary standpoint	6. insufficient space for very much equipment at the same time
7. good vocational guidance	7. community, family, and cultural patterns have an adverse influence in student selection of vocational subjects
8. cooperation with guidance and registrar in helping students set goals	8. lack of time to counsel student
	9. lack of opportunity to counsel student before entering program

TABLE 120

Forces For and Against Individualized Use of Performance Objectives

Forces For	Forces Against
Student Characteristics	
1. self-image of student can be enhanced by having an individual curriculum	1. legal requirements for licensure and certification
2. student that does not meet physical or manual dexterity qualifications for a certain job can be redirected into another area	2. inability of student to comprehend written performance instructions
3. known exactly what is expected for successful completion	3. some students do not work well individually
4. realistic attitudes of own capabilities	4. teacher does not have priviledge of student selection
	5. few have definite vocational goals
	6. lack of physical or mental ability to achieve goals
	7. attitudes toward different types of jobs (etc.)
Teacher Skills/Expertise	
1. teacher expertise in field	1. lack of information on specific performance objectives for a particular job within the field
2. teacher may have skill to teach common performance objectives in group activities	2. insufficient time to implement individualized instruction in the classroom or clinical area
3. once major plan is completed, classroom work and activities require little planning	3. too many individual programs - time consuming to set up
4. understanding students and his need	4. not wanting to change "status quo" writing P.O.; recording keeping teacher not wanting to go the "extra mile"
5. knowledge of job market and subject matter	
Materials	
1. V-TECS catalogs	1. not using materials available
2. Interstate Distributive Consortium materials - already available competency-based curriculum	2. improper evaluation using testing scores
3. valid tests	3. not using films and resource people
4. good career catalogs	4. lack of funds for materials
5. career films	5. lack of appropriate subject matter
6. resource people	6. problems in obtaining A.V. materials
7. up-to-date materials	7. materials not available in many vocational areas
	8. funding and materials selection are problems

TABLE 120- continued

Forces For and Against Individualized Use of Performance Objectives

Forces For	Forces Against
Organizational/Institutional Characteristics	
1 administrative support	1. no administrative support
2. community sharing of cacilities - internship O.J.T.	2. lack of adequate physical facilities
3. provide assistance as far as time, money, and support in individualized instruction	3. problems created by legal restrictions
4. student minded	4. overloading of classes
	5. time structure set up by secondary schools may not be adequate to meet performance objectives
	6. no teacher input in student selection
	7. programs that take away from job availability (Fed., State, County) and place untrained people in job
	8. outside agencies inabilities to accept the standards of programs
	9. school attitudes about vocational schools "dumping ground"
	10. administration refusal to remove student from a field where he can not succeed

TABLE 121

Forces For and Against Individualized Criterion-Referenced Testing

Forces For	Forces Against
Student Characteristics	
1. written performance objectives bring about awareness of goal and relation to objectives	1. frustration at being at a different point in training from his friends
	2. student doubt of validity of tests
Teacher Skills/Expertise	
1. easy to ascertain degree of success in order to plan furture instruction	1. lack of time to construct tests and remedial materials
2. aids in preparation of materials for individual	2. lack of understanding of construction of CRT
3. desire for student to perform successfully	3. fear of designing unfair test
	4. non-use of test for follow-up
Materials	
	1. performance of tasks sometimes limited by lack of equipment or prepared materials
Organizational/Institutional Characteristics	
1. simplifies method of accountability	

TABLE 122

Forces For and Against Individualized Pacing

Forces For	Forces Against
Student Characteristics	
1. fast learning rate	1. slow learners uninspired
2. self motivation	2. low self motivation
3. favorable individual differences	3. what is an adequate student rate? It may vary depending on the nature of the study.
4. enables the student to truly master a subject before proceeding	4. natural inclination to loaf and achieve the minimum effort to pass
5. changes the emphasis from classroom ranking to individual achievement	5. discipline problems
6. powerful motivation and initiative on the part of the student	6. disinterested students
Teacher Skills/Expertise	
1. adequate training	1. insufficient training
2. positive attitude	2. low concern and interest
3. easier to sustain classroom interest	3. determining an adequate rate
4. a very organized teacher could handle this quite easily	4. it requires too much time to maintain program plans and progress checks
	5. may make it difficult to assign grades that are perceived as fair by the student
	6. may require teacher
	7. not sufficient time for accurate recordkeeping to see if the student is ready to progress to the next objective

TABLE 122 - continued

Forces For and Against Individualized Pacing

Forces For	Forces Against
Materials	
1. once established, materials need not be prepared again but just updated	1. will require more materials
2. materials are more efficiently used	2. lack of monies
3. adequate instructional resources	3. lack of time to be creative
4. a variety of media may be available to help students	4. may not be enough materials for students to progress at their own pace; they may have to wait for someone to finish, for example, a ten-key adding machine if that is their next objective
Organizational/Institutional Characteristics	
1. may decrease the quantity of equipment since the students will be spaced out and using at different times	1. may encourage graduating students to expect too much personal consideration which is not likely to be duplicated in industry
2. paraprofessional assistance	2. large classes
3. optimum student load	3. insufficient space
4. adequate space	4. at secondary level "time" requirements
5. the school may be set up open-entry, open-exit which would allow for students to move along easily	5. lack of teacher aides (paid or unpaid)
	6. the administration may lend itself to a more structured atmosphere

TABLE 123

Forces For and Against Individualized Use of Media and Materials

Forces For	Forces Against
Student Characteristics	
1. gives student a wider option from which to choose a workable approach	1. may provide a student with a built-in excuse for non-performance
2. encourages the students to understand and expect a realistic roll for his talents	2. hinders student's total reading development
3. meets the student's individual needs	
Teacher Skills/Expertise	
1. makes teacher aware of more media and approaches	1. difficulty in determining effective materials for a particular student
2. it makes the problem of classroom discipline more manageable	2. requires much extra time in searching for adequate materials
3. it aides the teacher in becoming more positive since it requires individual attention which is basically a positive stroke	3. it is difficult for the teacher to determine an appropriate approach for each student; may expect too much or too little.
4. teacher has demonstrated skills for making AV materials and equipment operation	4. lacks ability to identify learners' needs
	5. lacks talent to make own materials
Materials	
1. it makes the material more appropriate for the task and reduces irrelevancies	1. it will require many different methods thus increasing cost
2. wide variety of media available	2. lack of money
3. media specialist available to help	3. lack of time to be creative
Organizational/Institutional Characteristics	
1. principals' help and encouragement	1. lack of resource person
2. can be used for groups and individuals	2. school schedules
3. it provides greater assurance of graduating effective students	3. lack of space
	4. there is much more media to manage and control; inventory control

TABLE 124

Forces For and Against Individualized Grouping

Forces For	Forces Against
Student Characteristics	
1. students enjoy the interchange of ideas	1. personality conflict
2. students enjoy the companionship	2. differing rates of study cause difficulty
3. opportunity to practice natural rolls such as leadership, teamwork, etc.	3. discipline problems may be intensified
4. need for social interaction	4. social, economic conditions
5. equal competency levels	5. apathy due to slow learning
6. common talents "native abilities"	6. channeling student unfairly to perform same tasks they do well
7. many students work better in groups as contrasted to 1-to-1 or large groups (30+)	7. some students do not work well in groups
	8. personality conflicts
Teacher Skills/Expertise	
1. forces the teacher to be more flexible and skilled	1. makes classroom control more difficult
2. better utilization of time; and could enable the class to cover more materials	2. absenteeism causes difficulties
3. traditional teacher education thrust is oriented toward group interaction	3. do not leave time to design material
4. teacher-student time allocation improves	4. lack of experience working in individualized and small group settings
5. many teachers have above-adequate skills in developing group activities	5. tendency to overuse as "catch all" problem solver
	6. do not have time to design materials
	7. some teachers are not interested in grouping

TABLE 124 - continued

Forces For and Against Individualized Grouping

Forces For	Forces Against
Materials	
1. much material available for small group activity	1. cost of materials
2. adequate consumable materials	2. inadequate funding
3. human expertise community resources	3. time, student scheduling
4. audio-visual	4. not enough prepared or published materials to group sufficiently
5. some subject areas are quite conducive to grouping (autobody)	
Organizational/Institutional Characteristics	
1. can consume equipment	1. in limited space it is difficult to accommodate small group activity
2. enables the student to practice acceptable business type interactions	2. group activity often appears disorganized and undisciplined to a superintendent
3. administration oriented toward student needs	3. institution and administration are only interested in discipline and F.T.E.
4. administrators aware of vocational funding sources and uses	4. physical facilities of the institution
5. class scheduling may allow for student to be able to get supplementary work	
6. administration encourages individualized instruction	

TABLE 125

Forces For and Against Individualized Use of Contingency Management

Forces For	Forces Against
Student Characteristics	
1. open to behavior changes	1. rigid behavior
2. open to new ideas	
3. accept constructive criticism	
Teacher Skills/Expertise	
1. be able to "read people"	1. authoritarian approach
2. alert to changes in students	2. not recognizing priorities of modifications
3. teacher willing to go the "extra mile"	3. lack of "ego" strength
4. early diagnosis before problem gets out of hand	
5. read county policy and procedure handbook	
Materials	
1. inservice T.V. classes	1. unwilling to obtain the information available
2. college credits	2. lack of good materials
Organizational/Institutional Characteristics	
1. support from administration for formalized contingency management	1. lack of support
2. observation of county and school policy with no exceptions	

TABLE 126

Forces For and Against Individualized Recordkeeping

Forces For	Forces Against
Student Characteristics	
1. students like to see their individual work record, work samples, and progress on objectives in their individual folders	1. student carelessness in keeping records can result in misleading information
2. letting the student assist in keeping his own records and folder will help him develop skills in keeping neat, accurate records	
Teacher Skills/Expertise	
1. teacher has the ability to organize the materials for the student so that the student will want to keep accurate records	1. lack of time to check the record keeping done by the student to see if it is done accurately or to do it yourself
2. the teacher can use the records as an aide to identify unmastered skills and plan future assignments	2. lack of time to test each student on mastery of each objective and record results
Materials	
1. V-TECS catalogs have list of objectives that must be mastered for job-entry skills in any area	1. teacher must find time to devise forms for individual students (or programs)
2. recordkeeping forms that the teachers may adapt for their course are available in the V-TECS catalog	2. many materials and forms available are not adequate for some courses
Organizational/Institutional Characteristics	
1. individual record-keeping and folders are useful in parent conferences	1. natural resistance to change
2. individual folders are useful in supplying the employer information about the student	2. the paper work and recordkeeping is time consuming

TABLE 127

Forces For and Against Individualized Assessment of Learner Characteristics

Forces For	Forces Against
Student Characteristics	
1. characteristics are quite varied	1. many students are poorly motivated
2. interested, seek individual teacher time and attention	2. not acclimated to individualized learning
3. goals are unusually varied	3. unrealistic FTE requirements
4. peer tutoring	4. lack of basic skills
5. student acceptance	5. wide range of abilities
6. desire to enter the vocational area	6. student variability in response to different types of testing
7. ability to read	7. low aptitude and ability for this area
	8. lack of motivation
Teacher Skills/Expertise	
1. many teachers have adequate skills in developing diagnostic instruments	1. do not have time to design materials
2. subject-matter expertise high	2. regular counselors and "academic" teachers are often not understanding and cooperative with vocational instructors, teachers, and students
3. teachers have high interest accomplishing the goal	3. identification of learning characteristics
4. desire to reach each student	4. lack of time to prepare appropriate individualized materials
5. prior knowledge of student's special characterisitcs	5. some do not know how to prepare test
6. easier to measure needed skills	6. availability of standardized test -cop-out
7. more certainty that student is acquiring the desired skill	7. personality traits
8. teacher should be experienced in his/her field	8. teacher certification without the experience
9. ability to convey knowledge to student	9. low pay
10. ability to identify the tasks	10. reluctance to change
11. personality traits	
12. willing to adapt to new ideas	

TABLE [illegible] -continued

Forces For and Against Individualized Assessment of Learner Characteristics

Forces For	Forces Against
Teacher Skills/Expertise - continued	
8. teacher should be experienced in his/her field	7. personality traits
9. ability to convey knowledge to student	8. teacher certification without the experience
10. ability to identify the tasks	9. low pay
11. personality traits	10. reluctance to change
12. willing to adapt to new ideas	
Materials	
1. wide variety of media available	1. insufficient time to review the free and inexpensive materials available
2. plenty of resource persons available at all times within the community	2. teachers' planning time is insufficient to review and utilize media material
3. more relevancy between test and task	3. lack of variety of appropriate media
4. instructional area compatible to industry	4. insufficient time to develop materials
5. curriculum department support	5. need for more remedial materials
	6. need for more published materials
	7. money (lack of)
	8. standardized tests
Organizational/Institutional Characteristics	
1. teacher input to guidance and registrar for student selection	1. time - workshops
2. administrator education in individualization	2. lack of money - equipment - supplies
3. principal encourages teachers to develop individualized programs	3. class - size
4. team approach allows simultaneous and individual activities	4. insufficient planning time for instructors
5. first class media center within the school and available for classroom use	5. improper utilization of teachers' scheduled planning time by administrators
6. adequate facilities	6. too many reports required of the teachers that prove to be duplication
7. cooperation from administration	7. disruptive interferences from administrative level due to extra-curricular activities

TABLE 128

Forces For and Against Individualized Grading

Forces For	Forces Against
Student Characteristics	
1. average and above average students would like a grade based on mastery of objectives	1. below average and poor students would like a grade based on attendance and attempts
2. grades on mastery or nonmastery would be a reinforcement to the good student	2. grades on mastery would be demoralizing to the poor student
3. leads to high job proficiency	3. great number of failures
4. passing employment test	4. discouragement
5. need for recognition	5. ability of student
6. behavioral modification	6. fear of failure
	7. peer pressure
	8. parental pressure
Teacher Skills/Expertise	
1. desire on the part of the vocational teacher to have the students master the objectives necessary for employment needs	1. lack of time to test each student on the mastery of each objective (and retest if necessary)
2. it would be easy for the teacher to construct tests to determine the mastery or nonmastery of an objective	2. inability of some teachers to be entirely objective when testing a student they strongly dislike
3. training and a variety of experiences	3. lack of training and experience in a variety of areas
4. interest of subject matter and student	4. time
5. teacher has lower testing skill requirement	5. number of students
6. eliminates teacher subjectivity	6. need for assistance to teacher (teacher aid, etc.)
	7. too many tests to administer in one day's time

TABLE 128 - continued

Forces For and Against Individualized Grading

Forces For	Forces Against
Materials	
1. V-TECS catalog is a good source of teacher materials	1. material is not easily adaptable to individualized learning because the reading level is too high
2. many teachers have adequate skills to develop materials to fit individual needs	2. few teachers have the time to develop the materials necessary, particularly in forms other than print
3. interest created by wide variety	3. lack of funds
4. current trends	4. lack of time for development
5. contact with publishers, businesses, and all other necessary sources	5. lack of a functioning media specialist
	6. lack of consumable materials
	7. need more lesson plans
Organizational/Institutional Characteristics	
1. businesses in the community can supply materials and resource speakers	1. parents and the community as a whole are not ready to accept grading on mastery or nonmastery
2. to reinforce these objectives, the businesses can let all other areas in the school and the administration know what they require in the way of job-entry requirements	2. a new reporting system would have to be developed; this would conceivably have to be nationwide to be effective
3. support from community	3. opposition from parents
4. cooperation from administrators	4. administrative school and/or county requirements for grades
5. active advisory committee	5. time constraint (i.e., only have students for a semester which sometimes causes problems)
6. absence has no effect on grades	
7. a commitment of the administration	

TABLE 129

Constraints on Individualization As Perceived by Fieldtest Instructors*

Area of Constraint	Number of Teachers
Obtaining Personal Information on the Student	
1. Student Characteristics	23
2. Administrative Factors	14
3. Time Factors	19
4. Vocational Teaching Area	1
5. Lack of Resources	3
6. Lack of Training	2
Presenting Job-Related Information to the Student	
1. Student Characteristics	8
2. Administrative Factors	7
3. Time Factors	17
4. Vocational Teaching Area	2
5. Lack of Resources	10
6. Lack of Training	1
Obtaining Information on the Job Market	
1. Student Characteristics	2
2. Administrative Factors	12
3. Time Factors	34
4. Vocational Teaching Area	1
5. Lack of Resources	6
6. Lack of Training	2
Sequencing Short-Term Goals	
1. Student Characteristics	17
2. Administrative Factors	6
3. Time Factors	10
4. Vocational Teaching Area	3
5. Lack of Resources	4
6. Lack of Training	4

*Data are from the individualization constraints questionnaire (Appendix).

TABLE 129- continued

Constraints on Individualization
As Perceived by Fieldtest Instructors

Area of Constraint	Number of Teachers
Using Performance Objectives to Individualize Instruction	
1. Student Characteristics	13
2. Administrative Factors	4
3. Time Factors	20
4. Vocational Teaching Area	2
5. Lack of Resources	5
6. Lack of Training	2
Analyzing Performance Objectives for Instructional Development	
1. Student Characteristics	4
2. Administrative Factors	2
3. Time Factors	25
4. Vocational Teaching Area	1
5. Lack of Resources	3
6. Lack of Training	4
Writing Performance Objectives	
1. Student Characteristics	4
2. Administrative Factors	3
3. Time Factors	25
4. Vocational Teaching Area	2
5. Lack of Resources	2
6. Lack of Training	5
Validating Course Objectives Through the Use of an Occupational Survey Catalog	
1. Student Characteristics	0
2. Administrative Factors	2
3. Time Factors	18
4. Vocational Teaching Area	2
5. Lack of Resources	10
6. Lack of Training	5

TABLE 129-continued

Constraints on Individualization
As Perceived by Fieldtest Instructors

Area of Constraint	Number of Teachers
Using Criterion-Referenced Tests to Individualize Instruction	
1. Student Characteristics	6
2. Administrative Factors	4
3. Time Factors	25
4. Vocational Teaching	2
5. Lack of Resources	4
6. Lack of Training	6
Constructing Criterion-Referenced Tests	
1. Student Characteristics	5
2. Administrative Factors	2
3. Time Factors	20
4. Vocational Teaching	1
5. Lack of Resources	4
6. Lack of Training	4
Determining the Number of Items on a Criterion-Referenced Test	
1. Student Characteristics	6
2. Administrative Factors	2
3. Time Factors	11
4. Vocational Teaching	1
5. Lack of Resources	2
6. Lack of Training	7
Determining and Utilizing Learner and Task Characteristics	
1. Student Characteristics	15
2. Administrative Factors	2
3. Time Factors	13
4. Vocational Teaching	4
5. Lack of Resources	11
6. Lack of Training	15

TABLE 129 - continued

Constraints on Individualization
As Perceived by Fieldtest Instructors

Area of Constraint	Number of Teachers
Utilizing Media for Individualization	
1. Student Characteristics	8
2. Administrative Factors	6
3. Time Factors	13
4. Vocational Teaching Area	3
5. Lack of Resources	18
6. Lack of Training	2
Reviewing, Selecting, and Adapting Instructional Materials	
1. Student Characteristics	4
2. Administrative Factors	4
3. Time Factors	26
4. Vocational Teaching Area	5
5. Lack of Resources	8
6. Lack of Training	0
Pacing	
1. Student Characteristics	20
2. Administrative Factors	6
3. Time Factors	6
4. Vocational Teaching Area	3
5. Lack of Resources	0
6. Lack of Training	1
Tutoring	
1. Student Characteristics	15
2. Administrative Factors	2
3. Time Factors	14
4. Vocational Teaching Area	1
5. Lack of Resources	2
6. Lack of Training	2

TABLE 129 - continued

Constraints on Individualization
As Perceived by Fieldtest Instructors

Area of Constraint	Number of Teachers
Grouping	
1. Student Characteristics	17
2. Administrative Factors	0
3. Time Factors	5
4. Vocational Teaching Area	4
5. Lack of Resources	1
6. Lack of Training	3
Setting up a Contingency Management Program	
1. Student Characteristics	12
2. Administrative Factors	3
3. Time Factors	13
4. Vocational Teaching Area	3
5. Lack of Resources	2
6. Lack of Training	19
Using Contingency Management to Individualize Instruction	
1. Student Characteristics	5
2. Administrative Factors	2
3. Time Factors	12
4. Vocational Teaching Area	5
5. Lack of Resources	1
6. Lack of Training	16
Formative Evaluation	
1. Student Characteristics	4
2. Administrative Factors	3
3. Time Factors	19
4. Vocational Teaching Area	1
5. Lack of Resources	2
6. Lack of Training	1

TABLE 129 - continued

Constraints on Individualization
As Perceived by Fieldtest Instructors

Area of Constraint	Number of Teachers
Summative Evaluation	
1. Student Characteristics	6
2. Administrative Factors	6
3. Time Factors	14
4. Vocational Teaching Area	4
5. Lack of Resources	2
6. Lack of Training	3
Recordkeeping	
1. Student Characteristics	3
2. Administrative Factors	7
3. Time Factors	27
4. Vocational Teaching Area	0
5. Lack of Resources	2
6. Lack of Training	6
Grading	
1. Student Characteristics	4
2. Administrative Factors	14
3. Time Factors	8
4. Vocational Teaching Area	2
5. Lack of Resources	0
6. Lack of Training	0
Total for All Individualization Categories	
1. Student Characteristics	201
2. Administrative Factors	113
3. Time Factors	394
4. Vocational Teaching Area	53
5. Lack of Resources	102
6. Lack of Training	110

TABLE 130

Opinions of Principals or Directors of Fieldtest Schools Regarding Implementation of the CDS Approach to Individualized Instruction

Section II

1. Do you think the manual presents a comprehensive approach to individualization? YES 11 NO 0 *. Please comment.

   a. Is evidence of a lot of effort.
   b. Not thoroughly comprehensive but very useful.
   c. They have been able to use the suggestions. All the information needed by them is contained in the section.
   d. Except you should emphasize it is not a one-to-one situation all the time. In that case it would wear most teachers out and be too costly.
   e. As long as class loads can be kept to a workable size.
   f. The manual is the most comprehensive approach to individualization I have ever encountered.
   g. It is the first effort I have seen dealing exclusively with parameters of individualized instruction.

2. Do you think the approach to individualization described in the manual is realistic and can be implemented? YES 8 NO 2 .

   a. Very realistic, implementation will present real challenges.
   b. It will require considerable planning...much concentration...almost entirely an IPI approach. The degree of need will vary in terms of the degree of theory in each program.
   c. With inservice on its use and trying it out at the same time.
   d. Very easy to use in child care - can be utilized effectively in vocational business education.
   e. I'm not too sure about implementation of this program, statewide, without forcing the issue. There are programs with set time-frames which must be met which need to be erased before open-ended ideas can be nurtured. Also, preparation of alternative methods takes time.
   f. As long as we can conform to county policy.
   g. Especially in adult education and technical schools with modifications in high school because of set time and grades required.
   h. Time and money does not realistically allow for complete implementation.
   i. Its realism and implementation potential is dependent upon such factors as class load, course of study, equipment availability, etc. In general I am optimistic about its use.

3. Do you think the manual describes a cost-effective approach to individualization? YES 8 NO 2 . Please comment.

   a. Measurable competencies would so indicate plus other features.
   b. On the basis that if the manual is implemented, I'm sure that instruction will be much more effective...therefore, the expense will certainly be justified.

*These numbers represent the number of principals or directors who responded yes or no. The comments that follow were taken verbatim from the questionnaires.

TABLE 130 - continued

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Section II - continued

c. Cost is always a problem.
d. As I have said before, I believe you must sell the personal advantages.
e. Teachers do not have time to design materials to cut costs as outlined.
f. If cost-effectiveness is measured in student quality at the end of the course, yes--but the manual could help some teachers justify additional (and questionable) equipment.

4. What attitudes do you think the following groups might have toward a system of instruction based on the manual:

Teachers?

a. Most should be receptive, however, it is going to take a lot of "burning the midnight oil" to do.
b. Many will be frustrated since it is quite a departure from present strategies....especially in industrial education.
c. Another change; sounds good, but, worth a try - will need guidance - cooperation of other staff needed.
d. Should find it very helpful.
e. Both teachers think it's great but it does require a lot of extra work on the part of the teacher. A new teacher might not be prepared to handle it.
f. Most instructors will not change easily. They must also place "average student" time-blocks on any competency to keep the lazy or "conning" student from coasting.
g. When it changes from experimental to regular class use the presentation would be better utilized through the use of films or paid release time to visit model situations.
h. A few, I'm sure would say impossible, but some are now using a very modified form of this.
i. Teachers have great interest in accomplishing goal, but do not have time.
j. This would depend upon subject area. I feel most teachers would be receptive to its use.

Students?

a. Will appreciate.
b. Some will desire more hands-on time...even with the basics.
c. Self-importance - individual success - increase individual effort - success vs. failure - making own decisions (basically good reception)

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d. Should benefit from a well thought out, planned learning experience.
e. Depends on the teacher. However, it would let them know exactly what the teacher should be doing and the students would know exactly what they should accomplish also.
f. The goal-oriented student will like individualized instruction, but may be influenced by peers who encourage a slow-down to save others' reputations. Students need to be taught the "new rules" of learning, too.
g. Some students feel they would rather be lost in the crowd and many others would be very receptive.
h. Very good attitude on the most part. Those exposed to a form of it seem to like it very much because they are not pressured to work at a certain speed in order to keep up with the others and they like to know exactly what is required of them.
i. Interested and want individual attention.
j. Students would be receptive if some socialization with peers is allowed.

Administrators?

a. Fine.
b. Some will experience insecurity within.
c. Positive - cooperative - coordination of key staff for student goal identification and fulfillment.
d. A good reference to suggest and evaluate vocationally directed program.
e. The curriculum administrator would have to be aware of what is expected in individualization and of the impact it would have.
f. It will be good for costs' sake. It will be difficult (time-consuming) to keep "track" or progress and memberships in classes.
g. Like to see it increased. Increased budget and increased help are needed to make the program more effective.
h. Good attitude because students would be progressing at their own rate which should result in much happier, satisfied students.
i. Student schedules restrict use of media, insufficient space. Supervisors, principals encourage individualized activities and team approach.
j. We are interested in quality and quantity of output. If administrators are convinced these can be achieved,then few would oppose its use.

Potential Employers?

a. Great.
b. I really don't know!
c. Positive - helpful - goal understanding - their commitment to learner.
d. Reference as to what skills/competencies to expect.

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e. Welcome the competency-based approach.
f. It would help them know the qualifications of the student in question for employment.
g. They should know what qualifications the potential employee has. We must let the employer know what competencies are and which ones the student has attained. For exmaple, a "secretary" can have many meanings.
h. A vocationally oriented employer would assume the vocationally trained employee would adjust to this program.
i. Definitely in favor of it. As it is now, a letter grade or the fact a person took a course does not mean he is qualified where competency-based instruction would assure qualification.
j. Performance is geared to mastery, rather than by clock.
k. I am not too sure that this group is interested in methods of instruction.

5. What characteristics of your student body do you think will hinder the approach to individualization described in the manual?

a. Our student body will accept this concept very well.
b. Those studdnts tuned to "doing" more than "theory."
c. Academic limitations - failure oriented - limited motivation.
d. Shouldn't hinder - there is sufficient time and opportunity.
e. Immaturity on the part of some students who would require constant supervision.
f. We found that a structured time-block is more desirable by students, but this can be done in competency-based education. Otherwise, I don't see any hinderance by our student body.
g. The student body will not hinder individualization in vocational areas. These areas are quickly filling up with interested students.
h. Class size, basic classes, modular scheduling. Majority of students feel as long as they work during class time there is no need to come in during IDS time to get ahead - as long as they are allowed to work at their own speed.
i. They are group oriented and not oriented individually to a variety of objectives which are pursued on their own.
j. The need to socialize to some extent. A "one-to-one" relationship is productive to a point. However, students cannot be expected to function indefinitely in this setting.

TABLE 130 - continued

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6. What characteristics of your student body do you think will help to implement the approach to individualization described in the manual?

   a. They generally appreciate getting to "the meat of the coconut."
   b. Those who need a great deal of individual attention.
   c. Desire to please and succeed - personal approach.
   d. Awareness (by some) of the necessity of choosing SOME career.
   e. The desire to be qualified for a job. A means of obtaining money for immediate or future needs or for future career.
   f. Since this is a vocational school generally no conflict will be found in teaching methods described in the manual.
   g. Those students who operate slower and become frustrated trying to keep up.
   h. Move freely around the classroom, talk freely to each other about their work.
   i. Our students are probably above average on the socio-economic scale. I feel they are more career oriented than the "average" student in Pinellas county.

7. Does your school have adequate materials and resources to implement the approach to individualization described in the manual? YES 7 NO 2 . Please comment.

   a. I feel we are ahead in this process.
   b. Some programs do and some don't.
   c. Not under our present budget.
   d. Instructors need time to prepare alternative media means to teach a concept.
   e. Materials are available upon request by department heads.
   f. Funds would be needed for supplies, equipment, materials, etc.
   g. Except in the industrial technical discipline, however "live" projects produce adequate teaching materials.
   h. We could always use additional resources to improve our instruction.

8. Does your county have adequate materials and resources to implement the approach to individualization described in the manual? YES 6 NO 1 . Please comment.

   a. Have some question about this.
   b. Not sure.
   c. We do have staff development funds available.
   d. Due to the size of our county we have a vast resource of materials.

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9. Do you know of any administrative policies, regulations, or procedures that would hinder implementation of the approach to individualization described in the manual? YES 3 NO 5 . Please comment.

   a. We are still geared to a somewhat time phased (lock step), so many hours to accomplish type thing (not this school, but district generally).
   b. Except at this time it would be up to the instructor whether to to accept the change or not.
   c. Our grading policy can be used with individualized instructions.
   d. Class size - 30-35 - students now. The larger the class, the more difficult it is to effectively individualize instruction.
   e. Grades being required every six weeks would hinder implementation of competency-based instruction as well as time limitations.

10. Do you know of any administrative policies, regulations, or procedures that would help to implement the approach to individualization described in the manual? YES 5 NO 2 . Please comment.

   a. Voc. director of county is committed to this, I feel.
   b. Policies support objective based goals and individualized instruction.
   c. Individualized instruction is being stressed in our county.
   d. Be accountable for what one says he is to accomplish.
   e. The concept of individualized instruction is frequently mentioned in administrative contexts in this county. Reaction seems to be favorable. The same applies to the local press.
   f. I would back the idea. There are several instructors who sponsor it, too. There is one other school who is changing over to that concept here in Pinellas County.
   g. The policies neither help nor hinder.

11. Please describe the type of training a teacher would need to implement the approach to individualization described in the manual.

   a. Training that causes teacher to focus on individual students and to prepare teaching materials in their way.
   b. Some teachers also need individualized training and ....need coordinators who can demonstrate the approach.
   c. Inservice and implementation assistance.
   d. Practical training for teaching. This can best be done (I think) in an internship program In Schools.

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- e. For successful implementation, a teacher-education course at university level.
- f. There are several concepts that must be given to the teachers: rate of learning, methods of learning, job task analysis, competency module format including a filing system, media usage and advantages, and what's in it for them.
- g. Inservice training.
- h. Extensive time to study the manual and prepare needed materials.
- i. An actual university course based on manual or many inservice days spent on study of the manual.
- j. Small group sessions, perhaps concentrating on only one section of the manual at a time.

12. What type of training would an administrator need to help implement the approach to individualization described in the manual?

- a. Training to understand the rationale and concept.
- b. Inservice (team approach responsibilities and duties) coordination.
- c. No special training.
- d. From the viewpoint of a principal, a few hours in seminar discussing concepts and parameters would be helpful in providing a foundation for assessing equipment loads, classroom loads and communicating with involved teachers.
- e. A manual supplied or audio-visual equipment, also work with the supervisory people in the program.
- f. Thorough briefing which would result in the desire to see the program go into effect.
- g. Similar to above but also include cost advantages to the system.

Section III

1. What do you see as major stumbling blocks to the adoption or adaption of the approach to individualization described in the manual? Please be as specific as possible.

- a. Preparing and acquiring materials and equipment necessary for an effective approach to truly individualize instruction. Willingness of instructors to change their present pattern of teaching, and the receptiveness of students.

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Section III - continued
b. Motivation. Both teacher and students must be motivated. Motivation of teacher will be dependent upon his knowledge and belief in individualized instruction. Students, in turn, must be motivated by teachers. Time. Too much time devoted to students on an individual basis could be conceivably argued as counter-productive.
c. Student schedules and space allocations are blocks.
d. Semester plan requires completion of course at a specific time with a specific grade.
e. Time for teachers to set up the program.
f. Funds to implement the program.
g. Most instructors will not "buy" the time effort involved to implement this program. Having money attached to the implementation for developing alternative means and materials is important.
h. Lack of funds for materials.
i. Lack of teacher-time required for implementation.
j. Large classes.
k. Teachers not trained in this area.
l. Teacher apathy. Some teachers may have what they think they need.
m. Instructors self-concept as to his ability to adapt to individualized program and record keeping necessary on each student. Development of individual objectives and testing. (Inservice and implementation as an on-going process - starting with a few and building toward total involvement should eliminate fears above.)
n. Funding.
o. Selling the concept to those teachers who may feel insecure with their present approach....even if it is not that effective.
p. Time phased thinking of lots of school people both teachers and administrators, plus the fact that some people have fear of something that's "new." Really there is nothing "new" about this.